

Kurukshetra

A JOURNAL ON RURAL DEVELOPMENT

Vol. 69

No.3

Pages 52

January 2021

₹ 22



**Perspectives of
Rural
Development**

Re-learning, re-thinking, re-innovating and re-inventing to be the Post COVID-19 order : PM

Prime Minister Shri Narendra Modi delivered the keynote address at the IIT-2020 Global Summit, organised by PanIIT USA, on December 04, 2020 through a video conference.

Shri Modi said, Government is fully committed to the principle of "Reform, Perform, Transform". He stressed that there is no sector left out from the ambit of reforms. He listed many path-breaking reforms brought in by the Government in various sectors such as assimilating 44 Union labour laws into just 4 codes, having one of the lowest corporate tax rate in the world, Production Linked Incentive Scheme in ten key sectors to enhance exports as well as manufacturing. He highlighted that even in these testing times of COVID-19, India has got record investment and much of this investment has come in the tech sector.

The Prime Minister said, our actions today will shape our planet tomorrow. He stressed that the post COVID-19 order will be about: Re-learning, re-thinking, re-innovating and re-inventing. This, along with a series of economic reforms in almost every field is what will re-energise our planet. He said this will ensure 'Ease of Living' and positively impact the poor as well as marginalised. He said several innovations which came out during the pandemic emerged from collaboration between the industry and academia. He said the world today needs viable solutions to adjust to the new normal.

PM Modi Delivers Keynote Address at IIT-2020 Global Summit



“ Post COVID-19 order will be about Re-learning, Re-thinking, Re-innovating & Re-inventing ”

-  Government is fully committed to the principle of 'Reform, Perform, Transform'. No sector is left out from the ambit of reforms
-  Even in testing COVID-19 times, India got record investment and the world sees it as trustworthy partner
-  In recent times a culture of Hackathons is developing in India where young minds are giving outstanding solutions to national & global problems

PM Modi Delivers Keynote Address at IIT-2020 Global Summit (2/2)



“ Post COVID-19 order will be about Re-learning, Re-thinking, Re-innovating & Re-inventing ”

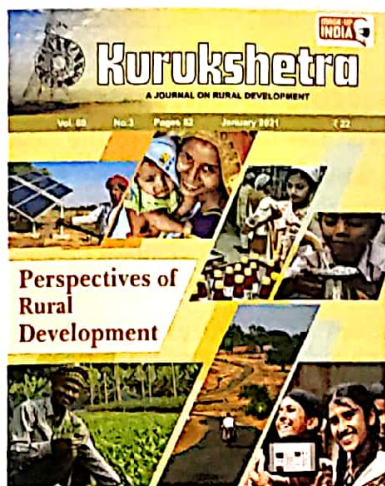
-  The collective force of the PanIIT movement can add momentum to the dream of becoming an AatmaNirbhar Bharat
-  PanIIT should 'Give back to India' & share their ideas & inputs on how we can mark 75 years of freedom
-  I urge alumni to debate, discuss & contribute to solutions in the emerging New World Tech Order

Talking about the 75th Anniversary of India's Independence in 2022, The Prime Minister urged the PanIIT movement to set an even higher benchmark on "Giving back to India." He asked them to share their ideas and inputs on how we can mark 75 years of freedom. "You could share your views MyGov. Or, you can share it directly with me on the Narendra Modi App" he added.

He said a culture of hackathons is developing in India in recent times and in these hackathons, young minds are giving outstanding solutions to national and global problems. He added that the Government is working with many countries in South East Asia and Europe to ensure that our youngsters get an international platform to showcase their skills and learn from best practices globally.

The Prime Minister said India is witnessing a sea change in the way it works. He said earlier, when IITs produced aerospace engineers, there was not a strong domestic industrial ecosystem to employ them. Today, with the historic reforms in the Space sector, the last frontier before humanity has opened up to Indian talent. That's why new space tech startups are coming up every day in India.

(Source: Press Information Bureau)



The Monthly Journal **Kurukshetra**

MINISTRY OF RURAL DEVELOPMENT

Vol. 69 No. 3 Pages 52

January 2021

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Subscription* :

Inland
1 Year : ₹ 230
2 Years : ₹ 430
3 Years : ₹ 610

Abroad (Air Mail)

One Year
₹ 530 (SAARC Countries)
₹ 730 (Other Countries)

* Revised from April 2016
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Kurukshetra seeks to carry the message of Rural Development to all people. It serves as a forum for free, frank and serious discussion on the problems of Rural Development with special focus on Rural Uplift.

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A new year heralds new hopes, new dreams and new goals. The first month of the new year is also the perfect time to see how far we have travelled, what challenges we have been able to overcome, learn from our successes and chart out a roadmap for the future. This is what we have attempted in the January issue of 2021-- looking at the far-reaching changes that have taken place in rural India, the policies and programmes of the Government of India that have shaped them and the numerous success stories that dot the countryside. Thus, we have aptly titled this issue as 'Perspectives of Rural Development'.

A very important facet of rural development has been the Swachh Bharat Mission. This issue looks at how the Swachh Bharat Mission in its second phase will provide impetus to the rural economy through construction of household toilets and need based community sanitary complexes, as well as the infrastructure for solid and liquid waste management. This issue also outlines the many infrastructure schemes for rural India --Pradhan Mantri Grameen Sadak Yojana (PMGSY), Deendayal Upadhyaya Gram Jyoti Yojana, Pradhan Mantri Ujjwala Yojana, Pradhan Mantri Sahaj Bijli Har Ghar Yojana, Pradhan Mantri Awaas Yojana (Gramin), BharatNet, Jal Jeevan Mission, among others—that have all played their part in improving the lives of the rural people in different ways and helped in reducing rural poverty.

Health, education and infrastructure facilities are the cornerstones of social and economic development. In this issue, we discuss how programmes such as Samagra Shiksha and Beti Bachao Beti Padhao have been playing a major role in ensuring quality education for rural India, especially for its disadvantaged girls. We look at how the newly launched Padhna Likhna Abhiyaan is now set to carry forward the message of education among rural adults in a similar fashion.

Rural entrepreneurial talent and frugal innovations catering to rural markets have the potential to revolutionize the rural ecosystem. The only requirement is some nurturing and handholding. As pointed out in one of the articles in this issue, one such effort is being made by the Atal Innovation Mission, NITI Aayog by establishing Atal Community Innovation Centres (ACICs) in the underserved/unserved regions of the country. The advent of new reforms in the agricultural sector offers an opportunity to the young innovators living the agricultural challenge to institutionalise local solutions.

Doubling rural incomes is one of the biggest objectives of government policies. The development of the animal husbandry sector can help enhance rural incomes, points out one of the articles in this issue. This will be possible only if animal husbandry is integrated into agriculture and allied sectors with the salient policies ensuring their effective as well as timely implementation.

With this issue, we start a new series 'India@75' looking at how various sectors have evolved over the last 75 years. The series, which will continue through this year and the next when India celebrates its 75 years of independence, starts off with a detailed analysis of how Panchayati Raj Institutions have played a critical role in implementing mega schemes of the government while ensuring people's participation in governance structure of the villages.

The year just gone by will be remembered by all for the COVID-19 pandemic and its impact on not just India, but the entire world. But year 2020 will also be remembered for the resilience shown by ordinary Indians and especially, the rural economy. And year 2021 will certainly be a year when the rural economy shakes off the old shackles and soars high.

Adopting a Holistic Approach towards Rural Development

R. Ramanan and Manglesh Yadav

Today, India is well known globally for its rapidly growing digital prowess, technological capabilities and its innovative spirit. With over 55000+ startups, 400+ incubators and over 34 Unicorns, the country is rightly being perceived as one of the fastest growing Startup nations of the world. Since ancient times, the Indian rural ecosystem has been an agrarian economy which has been predominantly dependent on agri and allied activities. The rural workforce has always been dependent on agriculture as its primary source of income. But now, a shift in the recent few years has been witnessed, as the rural youth have started engaging themselves in various sectors which are not directly aligned to the agriculture sector.

India has over 1.3 Billion people spread over 650,000+ villages, 4000+ small towns and cities, 715 aspirational districts, and 8 Tier-1 metro cities. The diversity of India in terms of demography, language, culture, customs, traditions, capabilities, skills and vocations is unparalleled across anywhere in the world. India can aptly be described by the famous Hindi saying, “Kos Kos per Pani Badle Char Kos Per Vani (The taste of water changes every mile, and every four miles the language)”. This not only describes the geographical and but also the demographical vastness and diversity of our country. India also enjoys a demographic dividend that is the envy of many a country with over 65 percent of its population under 35 years.

Today, India is also well known globally for its rapidly growing digital prowess, technological capabilities and its innovative spirit. With over

55000+startups, 400+incubators and over 34 Unicorns India is rightly being perceived as one of the fastest growing Startup Nations of the world. Yet over 70 percent of the population of India are in Tier-2, Tier-3, cities and in rural agri dominant India. Over 70 percent of the formal and informal labour workforce of India is associated with the micro, small and medium enterprises of rural India. The article will focus on this 'Bharat' which encompasses and integrates rural India. This Bharat is tremendously aspirational and is ready to leapfrog to the future. This Bharat believes that it can and will make India self-sustainable through the clarion call of a self-reliant“ AatmaNirbhar Bharat” by Prime Minister Shri Narendra Modi this year, that has galvanised a series of steps across the country for the achievement of same.

Since ancient times, the Indian rural ecosystem has been an agrarian economy which



has been predominately dependent on Agri and allied activities. The rural workforce has always been dependent on agriculture as its primary source of income. But now, a shift in the recent few years has been witnessed, as the rural youth have started engaging themselves in various sectors which are not directly aligned to the agriculture sector. The youth have become aspirational and want to bring about rapid changes in the rural strata of the society and hence they must be provided with the futuristic 21st century skill sets. It is rightly said that "The youth of today are the leaders of tomorrow" but an entrepreneurial innovative youth force equipped with the right skills and empowered by a supportive innovation ecosystem shapes the "tomorrow". This is the premise upon which we will start our journey to build a holistic approach for rural development.

It is well known that to achieve disruptive growth a sustainable plan is of utmost importance. This has been demonstrated since centuries and has been elaborated by the few instances which we have observed during the course of world history.

In 1800s, Prussians came up with the idea of a 'factory model of education'. The factory model of education states that the schools are built to train the future factory workers and that the students should essentially be trained to become efficient factory workers. Inspired by this the Industrial Revolution aimed at "manufacturing" employable workers for the huge pool of opportunities that had opened by the Industrial Revolution. The focus then was to create as many human resources as possible to meet the gap in demand and supply of labour. This model created a huge impact in the way Industrial revolution prospered and was propelled over the years, and thus lead the growth of economies.

Today, we are in a world which is ideating and innovating constantly, and this has been the driving force for both economies and countries. This can be seen via the advent of numerous startups and innovators which are driving creation of jobs and up-skilling among the youth. In United States of America, startups are creating

more new job opportunities per year as compared to the jobs generated by established firms. In fact, startups with less than 1 year in operations have generated 1.5 million jobs annually over the past three decades in the US alone. In Israel, unemployment rate tumbled from 9 percent in 2000s to 5.5 percent in 2010s due to newly established firms growing at 23 percent in that period. In contrast, Japan has lost its significance in the growing global economy due to stagnation in entrepreneurial activity.

The global economy is galloping towards growth by leveraging emerging technologies like 3D printing, robotics, IoT and sensor technologies, augmented and virtual reality that are becoming advanced yet affordable, accessible and available. Automation of mundane tasks leading to higher productivity, and technology driven growth will

The global economy is galloping towards growth leveraging emerging technologies like 3D printing, robotics, IOT and sensor technologies, augmented and virtual reality that are becoming advanced yet affordable, accessible and available. Automation of mundane tasks leading to higher productivity, and technology driven growth will become key enablers which will inevitably change the way we interact, communicate, transact and reach global markets soon.

soon become key enablers which will inevitably change the way we interact, communicate, transact and reach global markets. The current education system needs game changing radical transformations in its approach and methodologies keeping pace with rapidly changing

trends and digital capabilities of technology. The time thus has come to focus on building sustainable technology driven plans and approaches to drive the Indian economy to leapfrog towards the 5 trillion-dollar economy goal; with the right push towards creating more job creators and better job seekers this can be achieved.

As per a study conducted recently, percolation of the startup environment and innovation has been fragmented and has not reached the rural, Tier III and Tier IV cities due to various factors. The focus of these less percolated regions has been to create job seekers rather than encouraging / enabling new entrepreneurs and job creators. It is time that we drive a focussed approach in all such regions by providing them with basic factors viz. startup capital, skill building institutions to boost innovator confidence, risk appetite culture etc. Some of the factors which would contribute in create a sustainable approach to solving this problem holistically are been highlighted here.

Delivering Quality Education

The need for technology driven practical education has been stated in the New Education Policy (NEP) 2020. The NEP strives to make us realise the importance of experiential learning and also emphasises on the importance of developing relevant skillsets for an agile world that we live in today. The Indian education ecosystem took a leap when computers were introduced and today, we are standing at a similar cusp. Tomorrow's world shall be focussed on data driven approaches to solve the problems at hand. The education ecosystem thus needs to incorporate and grow, keeping these incoming changes in mind. The demographic dividend is on our side and we must focus on building experiential model of learning for the school kids.

One such programme that has created waves in the country are the Atal Tinkering Labs (ATLs) launched by the Atal Innovation mission, NITI Aayog. Atal Tinkering Labs are state of the art labs created in schools where children are introduced to new emerging technology toolkits. These toolkits are miniaturised electronics devices, 3D printers, sensors, Robotics, Arduino kits etc. These toolkits introduce the kids to a whole new world which runs on data and emphasises importance of computational thinking along while driving creativity.

Along with building the physical infrastructure the ATLs also focus on creating a pedagogy which makes quality delivery easy and accessible for all. This knowledge is passed via modules that are created and published in the public domain. There is also a year-round teacher training program which is run to equip the school teachers with the right skill set and introduce them to the new technologies. The program thus not only focusses on creating these quality delivery mechanisms but also propagates the same via various competitions that are conducted to engage more and more students. These labs though not part of the approved mainstream curriculum, go a long way in making young school students equipped with the right skill sets required to adopt the next-gen technologies. Similar such initiatives are conducted by various departments of government to inculcate the skill sets of Ideation, Design Thinking, Computational thinking and Physical thinking etc. among the school kids.

All these activities are being driven to make the education system contribute towards a sustainable future for the school kids along with creating a better society as a whole. Also, better education will drive towards building better equipped budding entrepreneurs and better job seekers thus contributing to the ecosystem.

Developing Youth as Change Makers

The focus of this decade is to achieve the Sustainable Development Goals (SDG) 2030 and this can be achieved by enabling the youth of the country to be at the front and centre of the solutions that are being created. There has been low penetration of the self-employment and start-up ecosystem in the rural, Tier III and Tier IV cities of the country and an even lower penetration of the understanding of the SDGs. Nevertheless, we have not lost a lot yet and there is still large scope to provide the world with sustainable solutions. India is a big market and provides a lot of opportunities and with this also come frugal Jugaad innovations that are created in our country. We celebrate these frugal Jugaad innovations but have clearly missed out on providing a sustainable path for the development and commercialisation of these developed innovations. We should now focus on providing an institutional based structure to these young innovators and support them in their journey of solving community challenges through replicable scalable innovations, and in the process, potentially creating solutions for global markets.

The vastness of the country along with challenges that we face today in the local regions should be harnessed to find local change makers and they should be provided with opportunities to solve and even fail. The institutional structures formed for developing the youth change makers must provide the young innovators with an equitable opportunity that currently exist with the urban youth via incubators/accelerators and encourage them to try without the fear of fail to achieve sustainable results. This way they will become agents of change and drive the economy. There has to be a focussed approach in spreading awareness about the SDGs and showcasing the solutions created by the local youth to the community leaders thus igniting more minds and making them drive the needed change.

One such effort is being done by the Atal Innovation Mission of NITI Aayog by establishing Atal Community Innovation Centres (ACICs) in the underserved/unserved regions of the country. These ACICs will focus on creating awareness about the SDGs and focus on providing young innovators with an opportunity to grow and make a difference.

A similar effort is to be carried out by creating a rural community youth fellowship program focussing on harnessing the talent of a young innovator and creating a viable solution to a local SDG challenge. The programme can be implemented as an extension of an existing incubator or by creating a separate space, exclusively for pre-incubation like the ACICs. Such a program would be highly beneficial in a Tier II and III city, rural areas or areas that traditionally do not have a strong entrepreneurial ecosystem. By giving the youth space and support to start and grow local enterprises, the fellowship would create much needed momentum required for entrepreneurship in the region along with giving a kickstart to the rural economy.

It is also imperative that this fellowship program is strongly supported by a Public Private Partnerships (PPP) network. The private sector may drive the fellowship by providing the fellows with a relevant business challenges derived from triple bottom-line goals and guide the fellows through the entire process of developing and implementing the solution. This fellowship can also be treated as an on-job-training for the fellows, at the end of which the fellow may receive a placement offer from the associated corporate or a certificate recognising the efforts made by the fellow during the entire year. The fellowship should also explore liaising with the state and district innovation cells and tapping into the currently unutilised District Innovation Funds to create a holistic approach to spur innovation and entrepreneurship in the region.

Digital Push and Transformation of the Agrarian Economy

Since decades, the rural economy has been revolving around agriculture and allied activities. Farm mechanisation and creation of sustainable value chains has been a pain point that not many innovators have been able to solve. The farm to fork model is complex and has challenges that the

startups and rural India is still struggling to solve as a whole. But with the advent of new reforms in the agricultural sector there is an opportunity given to the young innovators living this agricultural challenge day-in and day out to institutionalise local solutions.

With the advent of new technologies like the AI and block chain, the entrepreneurs can solve the farming woes of the country. These technologies will not only provide inputs on the growing patterns of the crops but also provide farmers with the knowledge of domestic and global demands of the market. The Startups can provide the farmers with quality seeds, technology driven irrigation and precision agriculture mechanisms, water conservation, and demand forecast based market opportunities in the pre-harvesting phase. They can support the farmers by providing them with technology driven solutions for quick harvesting and with proper storage facilities. The startups can provide the farmers a direct market linkage or may decide to become the buyer of the farm product. The startup and the farmers can also enter into an agreement to make a value-added product from the farm product and sell the product in the market together. All of the above opportunities exist for startups to and create a real change in the agrarian economy.

It is appropriate here to applaud the efforts taken by the local civil society organisations/ NGO's which are helping in the formation of local Farmer Producer Organisation (FPO's). These FPO's also can work with the startups in all the above-mentioned activities. The FPOs provide the farmer with an added opportunity of creating a bigger value adding network and driving an integrated approach towards creating a vibrant rural economy.

All these efforts stated shall not only be beneficial for the holistic development of the rural economy today but also will have a sustainable future for an AatmaNirbhar Bharat that can serve the world.

(The authors are R. Ramanan, Mission Director, Additional Secy - Atal Innovation Mission, NITI Aayog and Manglesh Yadav, Innovation Lead - AIM, NITI Aayog. Email: r.ramanan@gov.in and manglesh.yadav@nic.in. Views expressed are personal)

Swachh Bharat Mission Phase II aims for Sampurna Swachhata

Yugal Joshi

The Government of India, in February 2020, approved the Phase II of the Swachh Bharat Mission- Grameen (SBM-G) with a total outlay of Rs. 1,40,881 crore to focus on the solid and liquid waste management (SLWM) and on the sustainability of ODF status. The Phase II will provide impetus to the rural economy through construction of household toilets and need based community sanitary complexes, as well as the infrastructure for solid and liquid waste management such as compost pits, soak pits, waste stabilisation ponds, bio-gas plants, material recovery facilities etc. The Swachh Bharat Mission in its second phase is committed to achieve Sampurna Swachhata by transforming the Mission into a Jan andolan.

In June 2019, the Department of Drinking Water and Sanitation decided to make an iconic swachhata anthem. Inspiration was the classic of 1980s on unity and integrity, the iconic Mile Sur Mera Tumhara and several sittings were held with the lyricist Swanand Kirkere to get the message right.

Sanitation by nature is a continuous work. The day we stop cleaning our streets they become dirty again. Further, as Swachh Bharat Mission (Grameen) in its first phase devoted itself in making India open defecation free (ODF), there was still a lot to be done for effective solid and liquid waste management etc. Thus,

achieving ODF status was the first great peak conquered, in a series of many more such peaks. And it is not possible without making everyone aware about it and without taking everyone along. Thus were born the lines, हमें और आगे जाना and स्वच्छता संदेश की हमें, जोत से जोत जगाना¹।

Under the visionary leadership of the Prime Minister Shri Narendra Modi, the Swachh Bharat Mission became world's largest behaviour change programme and India achieved the seemingly impossible task of becoming open defecation free in a period of five years. It could become possible because the Prime Minister transformed the Mission into a Jan Andolan (people's

यहाँ तक आ पहुँचे, हमें और आगे जाना।
स्वच्छता संदेश की हमें, जोत से जोत जगाना।

**(Many more peaks wait to be conquered;
we have to illuminate them with the
message of cleanliness.)**



movement), with 130 crore people from all walks of life contributing to make this programme a success.

As a result, rural sanitation coverage has increased from 39 percent in 2014 to 100 percent in 2019 with over 10.2 crore toilets built across Indian districts, converting them to ODF. Various Global agencies such as UNICEF, WHO, BMGF, Dalberg and others have estimated significant economic, educational, environmental, health and social impacts of Swachh Bharat Mission's ODF achievements. India achieved SDG Goal for providing safe sanitation for all 11 years before the targeted year 2030.

The success of the programme is attributed to the 4 Ps - political leadership, public financing, partnerships and public participation. With the Prime Minister leading from the front, SBM in true sense became a people's movement, of such a magnitude that few could have imagined.

Obviously, these unprecedented gains need to be sustained for many years to come so that they become a permanent habit, and also India has to transform its ODF villages to sampurn swachh villages. Therefore, the work on sanitation and behavior change continues.

As the Prime Minister said on 2nd October 2019, "But now the question is—whatever we have achieved is that enough? The answer is simple and clear. What we have achieved today is just one stage, only one level. Our journey towards clean India continues unabated."

Thus, to pursue the objectives of clean India, extensive discussions with the States, Union territories, other Ministries/ Departments of Government of India, NITI Ayog and other stakeholders began. Within five months, the Government of India, in February 2020, approved the Phase II of the Swachh Bharat Mission- Grameen (SBM-G) with a total outlay of Rs. 1,40, 881 crore to focus on the solid and liquid waste management (SLWM) and on the sustainability of ODF status. At about same time the 15th Finance Commission report for the year 2020-21 was released. It also provided much-needed tied grants for sanitation to rural local bodies. Thus, the Phase II of the SBM(G) is planned to be a novel model of convergence between different verticals of financing and various schemes of the Central and State governments.

The Department of Drinking Water and Sanitation is implementing it in Mission Mode from 2020-21 to 2024-25. The Phase II will provide impetus to the rural economy through construction of household toilets and need based community sanitary complexes, as well as the infrastructure for solid and liquid waste management such as compost pits, soak pits, waste stabilisation ponds, bio-gas plants, material recovery facilities etc.

Objectives of the SBM Phase II

ODF became a buzzword during SBM Phase I and India becoming ODF was such a huge achievement that it was thought to have a resonating phrase for a clean village, to indicate a step-by-step progress. Thus, the phrase an ODF Plus village was coined.

An ODF Plus village is defined as a village that sustains its open defecation free (ODF) status and also ensures solid and liquid waste management and is visually clean. And the key objective of the SBM Phase II became to make villages across India ODF Plus villages.

In the Phase II guidelines, visual cleanliness has been defined. A village is called visually clean if at least 80 percent of its households and all its public places have minimal litter and minimal stagnant water, and the village does not have any plastic waste dump.

The components of the SBM Phase II to achieve ODF Plus status as spelt out in the guidelines are: constructions of individual household latrines, retrofitting of toilets, need based construction of community sanitary complexes, biodegradable waste management, GOBAR-dhan (Galvanising Organic Bio-Agro Resources-dhan), plastic waste management, grey water management and faecal sludge management.

To declare a village ODF Plus following checklist is provided in the guidelines:

- (i) All households to have access to a functional toilet facility.
- (ii) All schools, Anganwadi centres and Panchayat Ghars have access to a functional toilet, with separate toilets for female and male.
- (iii) Public places to be visually clean.
- (iv) At least 80 percent households and all public institutions have arrangements for managing biodegradable solid and liquid waste.

- (v) The village has a plastic segregation and collection system.
- (vi) At least five ODF Plus IEC wall paintings per villages on five key themes of ODF sustainability, hand washing with soap, biodegradable waste management through compost pits, grey water management through soak pits and plastic waste management.

Guiding Principles for Implementation of SBM Phase II

Phase II of the Swachh Bharat Mission is more complex and challenging. Therefore, few guiding principles have been laid down for ease of implementation and to achieve the desired goal in the given time frame. These principles may be summarised as:

- (i) Ensuring that no one is left behind: If there are any new eligible households coming up during Phase II or any eligible household which may have been left out so far, such household may be provided incentive to built toilets after identification by the GP/ District. There is also provision for need based community sanitary complexes.
- (ii) Promotion of Reduce, Reuse and Recycle to reduce the generation of waste at source.
- (iii) Utilisation of Existing SLWM infrastructure wherever possible by rejuvenating, upgrading and putting them in use.
- (iv) Community assets for SLWM to be prioritised and financed: To ensure that every household in the village has access to solid and liquid waste management (SLWM), as far as possible, creation of community assets for SLWM will be prioritised and funded.
- (v) Operation and maintenance to be an obligatory component of planning.
- (vi) Encouragement of technologies with low operation and maintenance costs.
- (vii) States will have the flexibility in deciding appropriate implementation mechanism and to choose technologies best suited to their conditions.
- (viii) Clustering of villages for maximum economic efficiency: Wherever necessary and possible, villages from different GPs can be clustered

under a single project based on relevant criteria.

- (ix) Convergence with other schemes: The programme is designed for convergent action and the co-financing of assets and services. For example, Finance Commission funds for co-financing of assets; Jal Jeevan Mission for grey water management; MGNREGS for dovetailing of funds and functionaries; and Ministry of Skill Development and Entrepreneurship for skill development of field functionaries etc.
- (x) Creating self-sustainable revenue models/ business models by encouraging private sector to leverage its expertise and resources for meeting the growing demand of SLWM. States should promote interventions that are based on remunerative models and on principles of cost sharing, cost recovery and revenue generation.
- (xi) Priority to villages on the bank of Ganga and other water bodies for implementation of SLWM interventions.

Planning for SBM (G) Phase II

Swachh Bharat Mission promotes decentralised sanitation interventions. Therefore, it is required that each Gram Panchayat prepares Village Action Plans for all of its villages in a convergent manner for the SBM(G) and the Jal Jeevan Mission, in a participatory manner, especially involving women and marginalised people, so that everyone could get equally benefitted from the implementation of the village action plan.

The plan should be presented in the Gram Sabha and endorsement of the Gram Sabha should be obtained and recorded.

At the district level, each district is required to prepare a District Swachhata Plan after consolidating its Village Action Plans. Districts are expected to develop the plan as per a date decided by the State Water and sanitation Committee every year and upload it on MIS after obtaining approval of the State Government.

States and UTs are required to develop a Project Implementation Plan (PIP) and Annual Implementation Plan (AIP) every year consolidating the District Swachhata Plans to achieve the objectives of SBM(G) Phase II. The National Scheme

Sanctioning Committee (NSSC) then considers and approves the PIPs and AIPs. The States and UTs are required to develop and upload these plans on IMIS by the 1st March of every year.

Information, Education and Communication (IEC)

Swachh Bharat Mission Phase I is known for its extraordinary IEC activities. Phase I was not a toilet construction at scale programme but was a behaviour change programme motivating people to build and use toilets. Claimed as the world's largest behavior change communication programme, IEC of the Swachh Bharat Mission campaign had seen thousands of behavior change campaigns, iconic mass media campaigns and participation of millions of students, women, teachers, cadets, celebrities, political leaders, faith leaders and people from all walks of life; making it a true jan andolan.

SBM Phase II also aims at behavior change of the masses to adopt better sanitation and hygiene practices. Therefore, IEC is the key for success of the SBM.

5 percent of the total project expenditure has been provided for IEC and Capacity Building for SBM(G) Phase II. In Phase I, it was 8 percent for the IEC. Up to 2 percent of the money provided would

be utilised at Central level and remaining 3 percent at the District and State levels. The States have to put in its share of funds for IEC in the Centre to State ratio of 60:40, except NER/ Special Category States where the sharing ratio is 90:10.

States/UTs are expected to lead the IEC and Behaviour Change Communication (BCC) activities by planning of activities, developing campaigns, monitoring and evaluating them, engaging all stakeholders in State/ Centre's campaigns and facilitating knowledge sharing at all levels.

At the District level, Districts are also expected to prepare their annual IEC plans, allocate funds, ensure sufficient staff and extensively use social media for information dissemination.

Apart from the components of SBM Phase II mentioned above, other key IEC messages for ODF Plus are: Waste Segregation and Source, Menstrual Waste Management and Hygiene Promotion. SBM Phase II has done commendable IEC work for hygiene promotion, use of masks and maintaining physical distance during the COVID-19 pandemic.

Capacity Building

Training workshops, refresher trainings for sensitisation, awareness generation and technical knowhow are important to build the capacity of



human resources to lead and sustain SBM Phase II activities. Capacity of the key stakeholders at the state, district, block and village levels is required to be built to plan, implement and monitor ODF Plus activities. Stakeholders include members of Village Water and Sanitation Committee (VWSC), Block Water and Sanitation Committee (BWSC), District Water and Sanitation Mission (DWSM), Accredited Social Health Activist (ASHA), Anganwadi, Self Help Groups, CSOs/ NGOs etc.

Orientation and training may be on various aspects of ODF Plus, including promoting behavioural change through IPC, door to door visits, masonry work, plumbing, construction of compost pits, soak pits, sheds, and other SLWM activities. Training of the trainers is an important task of this Capacity Building exercise.

Swachhagrahies are the foot soldiers of the SBM(G) and have proved excellent motivators in bringing behaviour change for construction and usage of toilets. The role of these volunteers remains important even in Phase II. They may be able to play the same active role with sustained engagement, capacities strengthening and sharpening, and providing them appropriate incentives for their sustained engagement.

A detailed guideline on activity-wise incentives for these motivators/ swachhagrahies is provided in SBM Phase II guidelines. (For details pl. refer to <https://swachhbharatmission.gov.in/SBMCMS/writereaddata/portal/images/pdf/sbm-ph-II-Guidelines.pdf>)

Institutional Arrangements

There is a National Scheme Sanctioning Committee (NSSC) under the chairpersonship of the Secretary, DDWS for approval and revision of Project Implementation Plan (PIP) for the States/ UTs, and also the Annual Implementation Plans (AIPs). At State level, there is State Water and Sanitation Mission. Usually in every State, there is a State Mission for SBM(G). Minister in charge of the department officiates as the Chairperson of its Governing Body. This State Mission supervises the implementation of SBM(G), prepares AIP and PIP, receives grants-in-aid and disburses it downwards.

At district level there are District Water and Sanitation Missions headed by the District

Collector or CEO Zila Panchayat. Similarly in blocks, there are Block Water and Sanitation Committees and at Panchayat level, there is Village Water and Sanitation Committee under the Sarpanch.

Role of Panchayati Raj Institutions (PRIs)

As per the Constitution 73rd Amendment Act, 1992, sanitation is included in the 11th Schedule. Therefore, the role of Gram Panchayat (GP) is pivotal in implementing SBM (G). At cutting edge, PRIs play even a greater and very important role in Phase II, especially after the earmarked provision for sanitation activities by the 15th Finance Commission. All institutions and committees working within the GP framework have to prioritise sanitation within their programmes.

Each Gram Panchayat is expected to develop a village swachhata plan for each financial year and feed it as per GDP planning principles in the designated Plan Software, as well as into the SBM (G) MIS. Receiving funds, subject to conformity with State arrangements, and contributing from their own resources for the financing of community toilets and SLWM infrastructure are some of the important roles of the PRIs.

With the support from the District, the GPs are expected to engage with business, corporate, social organisations and financial institutions for creation of assets and their operation and maintenance (O&M). The GP is also the custodian of the assets such as community sanitary complexes, drainages and SLWM infrastructure.

The monitoring of the Phase II activities are assigned to the Block level and District level PRIs. The GP has to organise and assist in organising social audits of the Swachh Bharat Mission.

Financial Planning and Programme Funding

SBM (G) is a centrally sponsored scheme with fund sharing pattern between Centre and States being 90:10 for North-Eastern States, Himachal Pradesh, Uttarakhand and UT of Jammu and Kashmir; 100 percent from Centre for remaining UTs and in a ratio of 60:40 for other States. While corresponding funding share is available from Government of India, it is important that the States/ UTs and Districts undertake financial planning to ensure that all credible plans of Districts and

Table 1
Programme Funding Provisions

Components		Financial assistance	
Incentive for construction of IHHLs (BPLs and Identified APLs)		Rs. 12,000 / - (including provision for water storage facility for handwashing and cleaning to maintain hygiene)	
SLWM activities	Village level SLWM activities	Village size	Financial support
		Upto 5000 population	Solid Waste Management: Upto Rs.60 per capita. Greywater Management: Upto Rs.280 per capita
		Above 5000 population	Solid Waste Management: Upto Rs.45 per capita Greywater Management: Upto Rs.660 per capita
		Note- 1. 30% of this amount will be borne by the GPs from their 15 th Finance Commission grants. 2. Each village can utilize a minimum of total Rs. 1 lakh based on their requirements for both solid waste and greywater management.	
	District level SLWM activities	Plastic Waste Management Unit (one in each Block)	Upto Rs.16 lakh per unit
		Faecal Sludge Management (FSM)	Upto Rs.230 per capita
GOBAR-Dhan Projects		Upto Rs.50 lakh per District	
Community Sanitary Complex (CSC)	Rs. 3 Lakh Note: 30% of this will be borne by GPs from 15 th FC		
IEC and Capacity Building	Up to 5% of the total funding for programmatic components (up to 3% to be used at State / District levels and up to 2% at Central level)		
Administrative Expenses	Up to 1% of the total funding for programmatic components		
Revolving Fund	Up to 5% of Project outlay subject to max. Rs. 1.5 crore per district		
Flexi Funds	The States can use flexi funds as per Ministry of Finance guidelines issued in this regard from time to time for Innovations / technology options at the State level to meet the local needs and requirements within the overall objective of the Scheme.		

Gram Panchayats can be funded and that there is enough resource allocated for all components of the programme. Programme Funding Provisions are provided in Table 1.

The SBM (G) Phase II funds are released to States/ UTs based on their performance and ability of achieve programme results. DDWS releases the funds under SBM (G) electronically to the State governments/UTs as per instructions issued by the Ministry of Finance from time to time. The State Governments have to release the funds to the State Swachh Bharat Mission (SSBMG) within 15 days of transfer of funds from the DDWS along with the matching State share. In case of advanced release of State share by the States; the same can be adjusted against the Central share released in subsequent year(s).

A condition for release of funds from Centre is that only after the respective government provides the undertaking that the funds earmarked under 15th Finance Commission grants for sanitation activities are being devolved to rural local bodies, SBM (G) funds will be released to the States.

Research and Development

SBM Phase II is technically much more complex than creation of individual household toilets. Therefore, review of sanitation technologies, promotion of appropriate technologies, strengthening decentralised O&M and use of technology for monitoring the progress of the programme, are some of the areas DDWS is focusing on. States are also encouraged to do the same.

At the Government of India level, a technical committee headed by the Principal Scientific Advisor to the Prime Minister, has been set up to consult for new technologies and innovations in the sector.

A Research and Development Advisory Committee under the chairpersonship of Joint / Additional Secretary of the Department works to promote research and development activities for the sanitation. State governments are also encouraged to establish Research and Development cells with adequate manpower and infrastructure. These cells are required to remain in touch with prominent technical and research institutions of the State.

Monitoring and Evaluation

DDWS leads the monitoring and evaluation of the SBM Phase II work in coordination with the States/UTs and Districts. The monitoring and evaluation has two aspects: first is ensuring the status of ODF Plus villages and second is that of created assets and expenditure incurred.

The monitoring framework should be able to identify whether: adequate IEC activities have been carried out for behavior change, ODF status of the village is sustained, adequate SLWM has been ensured and the village is visibly clean.

Monitoring activities are aimed towards attainment of programme results, both effectively and efficiently. These include independent assessments, periodic reviews, field visits and thematic consultations to ascertain the progress of the programme. Monitoring of both qualitative (outcomes) and quantitative (output) progress is provided in the operational guidelines.

The Way Forward

Inaugurating the Rashtriya Swachhata Kendra on 8th August, 2020, Prime Minister Shri Narendra Modi presented the way forward, "Cleanliness campaign is a journey, which will go on continuously. After getting rid of open defecation, the responsibility has increased now. After ODF, the country is now working on the goal of ODF plus. Now we have to improve the management of waste, be it in a city or a village. We have to speed up the work of making wealth out of waste."

Inspired by the vision of the Prime Minister, the Swachh Bharat Mission in its second phase is committed to achieve Sampurna Swachhata by transforming the Mission into a Jan andolan. It has to generate a bigger momentum than it did in Phase I and that's a great challenge. However, as it was in phase I, the Mission has the goodwill and support of 130 crore Indians, and it has the will, capacity, dedication, experience and energy to make it possible under the charismatic leadership of the Prime Minister.

Footnote

<https://www.youtube.com/watch?v=Bnr1vzb88zo>

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Education in Rural India: Schemes for Women and Youth

Banasree P

The Government of India's programmes such as Samagra Shiksha and Beti Bachao Beti Padhao are playing a major role in ensuring quality education for rural India, especially among the disadvantaged girls. The newly launched Padhna Likhna Abhiyaan is now set to carry forward the message of education among rural adults in a similar fashion.



The vision of a modern India, free from poverty, rests overwhelmingly on the growth and development of rural India. Challenges, big and small, however, are abound on every front—from lack of resources to infrastructural bottlenecks to social constructs. While many a developmental programme and sincere intervention by the government and civic society attempt to chip away at this humungous challenge, education for children and skill training for adults is ultimately the only way to help rural Indians escape the poverty trap they find themselves in and make them self-reliant. Coming to rural women, though there has been enhanced access to education over the years, those who are more educated remain unemployed because of the unavailability of formal jobs and low wages. Thus, lasting change in India's villages can come only when the objectives of eradicating poverty and unemployment are fulfilled --- not just by giving doles but by a three-pronged strategy of education, infrastructure and empowerment.

The Right to Education Act, 2009 has been successful in achieving near universal enrolment in elementary education, however retaining children remains a challenge for the schooling system. According to government data, in 2015-16, Gross Enrolment Ratio (GER) was 56.2 percent at senior secondary level as compared to 99.2 percent at primary level. GER denotes enrolment as a percent of the population of corresponding age group. Data for all socio-economic groups indicates decline in GER as we move from primary to senior secondary for all groups. Further, the decline in GER is higher for certain socio-economically disadvantaged groups, based on: (i) gender identities (female, transgender persons), (ii) socio-cultural identities (scheduled castes, scheduled tribes), (iii) geographical identities (students from small villages and small towns), (iv) socio-economic identities (migrant communities and low income households), and (v) disabilities. As per the National Sample Survey Report (71st round), more than 12 percent of rural households

in India did not have secondary schools within 5 km whereas in urban areas this percentage is less than one percent. Total enrolment in higher education has been estimated to be 37.4 million with 19.2 million males and 18.2 million females. Females constitute 48.6 percent of the total enrolment. According to the 2018-19 all-India survey on higher education (AISHE), GER in higher education in India is 26.3 percent, which is calculated for 18-23 years of age group. GER for male population is 26.3 percent and for females, it is 26.4 percent. For Scheduled Castes, it is 23 percent and for Scheduled Tribes, it is 17.2 percent as compared to the national GER of 26.3 percent. According to the 2018-19 data, 0.53 percent colleges are located in rural areas while 11.04 percent colleges are exclusively for females.

About 70 percent of people in India belong to the rural areas. Persons aged 15-29 years, who are considered as the youth, accounted for 27.4 percent of rural males, 27 percent of rural females, 28.2 percent of urban males and 27.8 percent of urban females in 2017-18. According to the PLFS Survey, unemployment rate in India was 5.8 percent in 2018-19. It was 5.6 percent among males and 3.5 percent among females in rural areas, while the rates were 7.1 percent among males and 9.9 percent among females in urban areas. For educated (highest level of education secondary and above) persons of age 15 years and above, unemployment rate in India was 11 percent and 11.2 percent in rural areas and 10.8 percent in

urban areas. In 2018-19, the unemployment rate for youth in the 15-29 years age bracket moderated but remained high at 17.3 percent, as against 17.8 percent a year ago. The unemployment rate among the rural male youth (persons of age 15-29 years) was 16.6 percent while the unemployment rate among the rural female youth was 13.8 percent during 2018-19. Incomplete and poor quality education translates into a workforce that is unable to find remunerative work, and survives on low paid, unstable jobs. Findings from the annual Periodic Labour Force Survey (PLFS) underline this as given below.

Rooting for Rural Education

Samagra Shiksha Scheme

Given these challenges, the Government of India has launched Samagra Shiksha -- an integrated scheme for school education with effect from 2018-19. It envisages the 'school' as a continuum from pre-school, primary, upper primary, secondary to senior secondary levels and subsumes the three erstwhile centrally sponsored schemes – Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). Bridging gender and social category gaps at all levels of school education is one of the major objectives of the scheme. The scheme reaches out to girls and children belonging to SCs, STs, minority communities and transgender. The scheme also gives attention to urban deprived children, children affected by

Table-1 (Estimated Unemployment Rate on Usual Status (Principal Status + Subsidiary Status) Basis for the Persons of age 15 years and above with different Educational Attainments

	2017-18				2018-19			
	Rural male	Rural female	Urban male	Urban Female	Rural male	Rural female	Urban male	Urban Female
Literate & upto Primary	3.1	0.6	3.6	1.3	2.7	0.6	3.4	1.5
Middle	5.7	3.7	6.0	5.1	5.3	1.7	5.4	4.3
Secondary	5.6	4.4	5.8	10.6	5.6	3.7	5.5	8.7
Higher Secondary	9.5	14.4	9.2	17.2	8.7	11.9	8	16
Graduate	18.1	32.7	11.7	24.4	17	33.9	12.9	20.5
Post graduate & above	13.3	36.8	8.6	19.5	16.3	36.8	7.3	18.6

Source: https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2019/06/Annual_Report_PLFS_2018_19_HL.pdf
https://www.im4change.org/docs/216Annual_Report_PLFS_2017_18_31052019.pdf

periodic migration and children living in remote and scattered habitations. Under the scheme, provision has been made for giving preference to Special Focus Districts (SFDs), Educationally Backward Blocks (EEBs), Left Wing Extremism (LWE) affected districts, and aspirational districts. Acknowledging that issues such as lack of toilets in schools and unavailability of schools within a short distance play a big role in school dropouts, especially among girls, the scheme supports states for strengthening of school infrastructure including in rural areas. The scheme provides for infrastructural strengthening of existing government schools based on the gaps determined by Unified District Information System for Education (UDISE) and proposals received from respective States/UTs. During 2020-21, under Samagra Shiksha Scheme, an outlay of Rs. 9812.09 crore, including spill-over for previous years, has been estimated for the improvement of school infrastructure. Budgetary allocation for Samagra Shiksha is Rs. 38,751 crore in 2020-21, against Rs. 36,322 crore in 2019-20.

Thus, under Samagra Shiksha, various interventions have been targeted to promote education, which include opening of schools in the neighbourhood as defined by the State, provision of free text-books up to Class VIII, uniforms to all girls and SC, ST, BPL boys up to class VIII, provision of gender segregated toilets in all schools, teachers' sensitisation programmes to promote girls' participation, construction of residential quarters for teachers in remote/hilly areas/in areas with difficult terrain.

In addition, there is a provision for twinning of schools under which well-functioning private or government schools in urban or semi-urban areas are linked with schools located in rural areas for interaction and exchange of experience. Under the exchange programme, the students from rural schools are brought to schools in urban areas for one week and vice-versa, for greater exposure. The Department of School Education and Literacy is also implementing the component of vocational skills training under the umbrella of Samagra Shiksha. The scheme has so far been implemented in 9585 schools with reported enrolment of 11,70,095 students.

Further, for promoting the merit/capacity of students, including those in rural areas, meritorious

students belonging to the economically weaker sections can avail the benefit of scholarship under National Means-cum-Merit Scholarship Scheme. The scholarships are awarded to meritorious students, whose parental income from all sources is not more than Rs.1,50,000/- per annum to arrest their dropout at class VIII and encourage them to continue the study at secondary stage. One lakh fresh scholarships of Rs. 12000/- per annum per student are awarded to selected students of class IX every year and their continuation/renewal in classes X to XII for study in a state government, government-aided and local body schools under the scheme.

Budget Allocation and releases Under Sarva Shiksha Abhiyan: Year-wise (Rs. in crore)

Year	Gol Budget	Gol Release	% of Gol Releases to the Budget
2014-15	24380.00	24122.51	98.94
2015-16	22015.42	21666.51	98.41
2016-17	22500.00	21678.46	96.35

Note: Release of Central Share as on 04.07.2017
Source: https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/ESAG-2018.pdf

Jawahar Navodaya Vidyalayas (JNVs)

The main objective of the Jawahar Navodaya Vidyalayas (JNVs) is to provide good quality modern education -- including a strong component of inculcation of values, awareness of the environment, adventure activities and physical education – to talented children predominantly from the rural areas without regard to their family's socio-economic condition. The Navodaya Vidyalaya Scheme envisages opening of one JNV in each district of the country. Altogether, 642 JNVs have been established in the country so far.

Eklavya Model Residential Schools (EMRS)

Eklavya Model Residential Schools (EMRS) were introduced in 1997-98 to provide quality upper primary, secondary and senior secondary level education to Scheduled Tribe (ST) students in remote areas to enable them to access the best opportunities in education and to bring them at par with the general population. As per Budget announcement 2018-19, every block having 50 percent or more ST population and at least 20,000



ST persons is to have an EMRS by the year 2022. As on 10.09.2020, there are 566 sanctioned schools across the country out of which 285 schools have been made functional. Another 174 new EMRSs will be sanctioned upto the year 2022. The approved construction grant for EMRSs is Rs. 20 crore per school with an additional 20 percent for the schools in North East, hilly areas, difficult areas and areas affected by LWE. Recurring grant in case of EMRS and EMDBS (Eklavya Model Day Boarding School) is respectively Rs.1.09 lakh and Rs.0.85 lakh per student per annum. Total budget allocation for EMRS during 2020-21 is Rs.1313.23 crore.

Mid-Day Meal Scheme

Though the Mid-Day Meal Scheme is targeted at young children studying upto Class VIII, it needs to be mentioned as it been one of the most successful programmes for keeping young children from disadvantaged sections like poor, dalits, tribals, girls and children of labour work force in schools. As per NSS 71st round, 70 percent children studying in class I to VIII in Government and aided schools, Special Training Centers (STCs)

and madras as as and maqtabs supported under Samagra Shiksha, get nutritious mid-day meals in rural areas. Approximately 11.59 crore children in around 11.5 lakh schools benefit daily from MDM. Since it is not possible to provide hot cooked meals due to COVID-19, State governments and UT administrations are providing Food Security Allowance (FSA) comprising foodgrains, pulses, oil, etc., (equivalent to cooking cost) to all eligible children till such time their schools are closed due to the pandemic.

Targetted intervention for Girls

Under Samagra Shiksha, various targeted interventions are made for girls, including those in educationally backward blocks (EBBs). These interventions include opening of schools in the neighbourhood as defined by the state, provision of free text-books to girls up to Class VIII, uniforms to all girls up to class VIII, provision of gender segregated toilets in all schools, teachers' sensitisation programmes to promote girls' participation, provision for self-defence training for the girls from classes VI to XII, stipend to CWSN girls from class I to Class XII, construction

**Components and Year Wise Budget Allocation in
Mid-Day Meal Scheme**

Year	2014-15	2015-16	2016-17	2017-18
Children covered (in crore)	10.22	10.03	9.78	9.83
Food grains allocated (in lakh MTs)	29.33	28.83	27.17	27.01
Budget allocation (in Crore)	13215	9236.40	9700	10000
Total release (in Crore)	10526.97	9151.55	9483.4	5669.99

Note: Project Approval Board (PAB) approval for 2017-18, ^Release as on 11th December, 2017

Source: https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/ESAG-2018.pdf

of residential quarters for teachers in remote/hilly areas/in areas with difficult terrain.

Kasturba Gandhi Balika Vidyalayas

Kasturba Gandhi Balika Vidyalayas (KGBVs) have been sanctioned in Educationally Backward Blocks (EBBs) under Samagra Shiksha, which are residential schools from class VI to XII for girls belonging to disadvantaged groups such as SC, ST, OBC, Minority and Below Poverty Line (BPL). In the last three years, 143 new KGBVs have been sanctioned. Presently, 4881 KGBVs are functional with total enrolment of 6,18,138 girls, out of which 3,30,238 (53.42%) are girls belonging to SC/ST communities. A total of 830 KGBVs have been upgraded up to Senior Secondary level under Samagra Shiksha.

Beti Bachao Beti Padhao

If Samagra Shiksha ensures education infrastructure for rural India, the Beti Bachao Beti Padhao (BBBP) scheme works to develop an enabling environment for girl child education. It addresses the issues relating to declining Child Sex Ratio (CSR) and aims to change the mindset of people so as to make them appreciate the value of girl child. It is a tri-ministerial, convergent effort of the Ministries of Women and Child Development, Health and Family Welfare and Human Resource Development. The specific objectives of the scheme are (i) prevent gender biased sex selective elimination (ii) ensure survival and protection of the girl child and (iii) ensure education and participation of the girl child through coordinated and convergent efforts. While the BBBP Scheme

does not enroll girls for any type of benefits from any segment of the society including rural areas, its biggest impact is in rural India where discrimination against the girl child is entrenched due to social attitudes, structural imbalances in society, and impediments in the education and empowerment of women and girls. Funds are released to all 640 districts in the country, with special focus on the 405 gender critical districts worst in CSR, by Ministry of Women and Child Development to implement the multi-sectoral and district level activities viz. inter-sectoral consultation, meetings of district task force, block level committees, innovation and outreach, information education and communication materials, awareness kit to anganwadi centres, monitoring, evaluation and documentation of the scheme, health and education related activities etc. Evaluation of BBBP scheme carried out by National Council of Applied Economic Research (NCAER) in August 2020 has indicated a positive behavioural change towards the value of girl child. The sex ratio at birth (as per Health Management Information System of the Ministry of Health and Family Welfare) has been set as a parameter for monitoring the progress of this scheme. The sex ratio at birth has shown an improvement of 16 points at national level from 918 (2014-15) to 934 (2019-20).

Empowering the Rural Woman

Mahila Shakti Kendra Scheme

The Government approved in November 2017 the Mahila Shakti Kendra (MSK) Scheme as a centrally sponsored scheme under Ministry of Women and Child Development to empower rural women through community participation. The scheme aims to facilitate inter-sectoral convergence of schemes and programmes meant for women both at the Central and State/UT level. The scheme envisages community engagement through College Student Volunteers in 115 aspirational districts as part of block level initiatives; District Level Centre for Women (DLCW) in 640 districts to facilitate women centric schemes and provide a foothold for Beti Bachao Beti Padhao (BBBP) scheme; State Resource Centre for Women to support respective governments in implementation of women centric schemes/programmes and also function as Project Management Unit for BBBP

Scheme with separate funds allocated for State/UT level activities. Capacity building of women collectives is envisaged in collaboration with non-governmental organisations (NGOs) / co-operatives societies/Krishi Vigyan Kendras in not more than 50 percent of the MSK blocks in the 115 aspirational districts to address livelihood needs of women, particularly those in remote/vulnerable areas where women are not in a position to move out individually of their immediate surroundings for formal skill training. DC/DM of the concerned aspirational district is mandated to call for proposals from NGOs and other institutions and evaluate their viability.

Till June 2019, administrative approval for implementing the scheme has been given in 31 States/UTs. SRCWs and DLCW were functional in 26 States/UTs and 113 districts respectively. Student volunteers had been identified by nine states for undertaking block level activities. District level activities were approved for 220 districts in Phase I (2017-18), 220 districts in Phase II (2018-19) and remaining 200 districts in Phase III (2019-20).

Adult Literacy Programmes

Saakshar Bharat Programme

Saakshar Bharat Programme (operational till March 2018) went beyond the '3' R's (i.e. Reading, Writing and Arithmetic); for it also sought to create awareness of social disparities and a person's deprivation on the means for its amelioration and general well-being. This programme was formulated in 2009 with the objective of achieving 80 percent literacy level at national level, by focusing on adult women literacy seeking to reduce the gap between male and female literacy to not more than 10 percentage points. It has four broader objectives, namely imparting functional literacy and numeracy to non-literates; acquiring equivalency to formal educational system; imparting relevant

skill development programme; and promoting a leaning society by providing opportunities for continuing education. The principal target of the programme was to impart functional literacy to 70 million non-literate adults in the age group of 15 years and beyond. This includes coverage of 14 million SCs, 8 million STs, 12 million minorities and 36 million others. The overall coverage of women is aimed at 60 million. A district, including a new district carved out of an erstwhile district that had adult female literacy rate of 50 percent or below, as per 2001 census, were considered eligible for coverage under the Saakshar Bharat programme. 410 districts belonging to 27 States/UTs of the country were identified to be covered under Saakshar Bharat. The programme provided for coverage of only rural areas in the eligible districts. As per the 2011 Census, literacy rate in rural areas stood at 67.67 percent with rural male literacy rate 77.15 percent and rural female literacy rate 57.93 percent.

Under the Saakshar Bharat Mission, around 7.64 crore learners successfully passed the biannual Basic Literacy Assessment Tests conducted by National Institute of Open Schooling between August, 2010 to March, 2018 and were certified as literates, with 5.38 crore females and 2.26 crore males.

Padhna Likhna Abhiyaan

The Padhna Likhna Abhiyan has been rolled out to replace Saakshar Bharat Scheme. Launched by Prime Minister Shri Narendra Modi on Literacy Day this year, it focusses on achieving 100 percent literacy by 2030. Under this scheme, massive literacy projects will be launched in the tribal and forests areas, prisons, slums, etc., with technology as a facilitator. It will focus on the basic literacy component in a four-month cycle among adults. For this purpose, the Government think tank, NITI Aayog, has underlined 112 aspirational districts.

Skills Training in Higher Education

The National Education Policy 2020 envisages that the school curricula and pedagogy will aim for holistic development of learners by equipping them with key 21st century skills and reduction in curricular content to enhance essential learning and critical thinking. The policy emphasises integration between vocational and academic streams in all schools and higher education institutions in a phased manner. As per the policy, vocational education will start in school from the 6th grade and will include internship.

Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS)

As education with skills is the need of the hour, the government launched the Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS) in 2019. It aims to cover 50 lakh students by 2022 by providing 'on the job work exposure' and stipend. SHREYAS is a programme conceived for students in degree courses, primarily non-technical, with a view to introduce employable skills into their learning, promote apprenticeship as integral to education and also amalgamate employment facilitating efforts of the Government into the education system so that clear pathways towards employment opportunities are available to students during and after their graduation.

National Apprenticeship Training Scheme (NATS)

National Apprenticeship Training Scheme (NATS) instituted by Board of Apprenticeship Training/Practical Training, Ministry of Human Resource Development, provides skill training to fresh graduates, diploma holders in engineering and technology and Plus 2 vocational pass-outs, which rural youth can take advantage of. There are 126 subject fields for graduate / diploma students for which one-year training is provided. In 2019-20, 51784 graduates and 37886 diploma holders 37886 were trained under this programme. In order to integrate vocational education with regular education which would be particularly advantageous for rural youth, the government has proposed to integrate apprenticeship embedded degree programmes to give impetus to vocational training. Accordingly,

University Grants Commission (UGC) has issued Apprenticeship/Internship embedded degree programme guidelines.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

The Ministry of Skill Development and Entrepreneurship is implementing Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2016-20 with an objective to provide skilling to one crore people under Short Term Training (STT) and Recognition of Prior Learning (RPL) across the country for four years i.e. 2016-2020 with an outlay of Rs.12000 crore. Under this scheme, post placement support of Rs. 1500/- per month per trainee is applicable for special groups including women for 2-3 months post training depending on placement within or outside the district of the domicile of the candidate.

Conclusion

Any assessment about education in rural India cannot be complete without discussing the various development programmes that have been launched over the years to achieve these all-encompassing objectives. The current public (Central Government and State Governments) expenditure on education in India has been around 4.43 percent of GDP (Analysis of Budgeted Expenditure 2017-18) and around 10 percent of the total government spending towards education (Economic Survey 2017-18). The National Education Policy 2020 states that the Centre and states will work together to increase the public investment in education sector to reach 6 percent of GDP at the earliest. Within this gigantic exercise, we need to especially track the path that rural women and rural youth have walked in their wake to better understand how these programmes have helped shape their lives, to what extent these have successfully equipped them with the necessary skills and what more needs to be done to further empower them.

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Recent Farm Bills and Benefits to Farmers

J. P. Mishra

The Government by enacting three recent bills for agricultural marketing, contract farming and essential commodity, has tried to eliminate the unhealthy and exploitative rules and procedures. The APMCs not only remain functional as a platform for marketing of agricultural produce but will be strengthened and become more transparent due to increased competition which is a pre-requisite for a well-meaning market. The Government is committed to make investments for the alternative system for marketing, better than the existing ones, as provided in the new Acts. These provisions must be implemented with vigor and objectivity.

Indian Agriculture is characterised by millions of farmers cultivating more than 200 field, horticultural and plantation crops across the country in three distinct seasons of Kharif, Rabi and Zaid (summer) on over 141 million hectares of cultivated land. This generates more than 1000 million tonnes of farm produce taking together foodgrains, oilseeds, sugarcane, and fibre crops. Baring sugarcane, all other produce is marketed through the APMCs marketing system domestically with some exceptions like basmati rice, grapes and a small fraction of onion and flowers being exported. Over the period, the marketed surplus ratio (MSR) of all the commodities has increased

so much so that in crops like sunflower and safflower the marketed surplus ratio is 100 and cotton and jute close to 100 (GOI, 2019)¹. In other crops also, the MSR has increased substantially during recent years. The other characteristics of the agricultural produce marketing in India is that these produces arrive in huge bulk in the market in a very short span of time, many a time, beyond the absorption capacity of the domestic demand and the management capacity of the existing market infrastructure and the system. The price discovery in the markets of APMCs except for those which are under e-National Agriculture Market (eNAM) has been opaque and heavily monopolistic, in the hands of select aggregators and commission



agents. The advances like contract farming for a pre-decided and mutually agreed price of a commodity experimented in the past on crops like tomato, potato, barley, etc in Punjab and Rajasthan and elsewhere had mixed response and farmers at large had reservations in entering the contracts. The investment and active private participation have been dismally low due to frequent imposition of the essential commodity act (ECA) limiting the storage, often much lower than the existing inventory of the industrial establishments or the warehouse capacity of the private traders. The ECA used to be imposed without thorough analysis. It cut on the larger private investment and proved prohibitive rather than facilitative.

Since 2000 onwards, multiple attempt were made to modernise the agricultural marketing system in India. In 2003, model APMC Act was formulated and shared with the States, followed by a Committee of State Ministers, In-charge of Agriculture Marketing to Promote Reforms under the Chairmanship of Minister of Agriculture and Marketing, Maharashtra submitted its report. As a follow up, the fruit and vegetables were brought out of APMC regulations and 20 States adopted to it. More concerted effort started after 2014. Consequently, Model Act on Agricultural Produce and Livestock Marketing (Promotion and Facilitation), 2017, Model Act on Agricultural Produce and Livestock Contract Farming and Services (Promotion and Facilitation) 2018 were formulated and launched by the Government. It must be noted that these model acts were prepared after thorough consultation and discussion with states, union territories, and experts and institutions. These Model acts were prepared to facilitate States to enact their own laws suitable to their local needs and conditions but received very lukewarm response.

On June, 2020, the Government promulgated three ordinances on farmers' produce trade and commerce; farmer agreement of price assurance and farm services; and essential commodity. Subsequently, the three Bill, i.e., The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020, The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020 and The Essential Commodity (Amendment) Bill, 2020 were passed by the Parliament on 20 September, 2020 to replace the ordinances. These Bill were considered by many

aspath-breaking and historic that would bring change in the agriculture the way we had been doing and looking at it. However, a fraction of farmers, farmer bodies and experts started expressing the serious apprehensions about these Bills. The so-called ill-effect of these Bills is being propagated amongst the farmers, largely, on imaginary grounds that these laws will lead to withdrawal of MSP, deprive the farmers from their lands in favour of big private players and cause hoarding of essential commodities. These apprehensions, though imaginative, have somehow percolated deeply in a section of the farmers, the largest being those who have been the biggest beneficiaries of APMC dominated procurements and the price realisation. Another apprehension is about diluting the present-day agricultural marketing thereby affecting the benefits of millions of the farmers. While such ideological arguments will continue, we must understand some basic facts that have necessitated such changes for the benefit of the farmers and those engage in agriculture.

The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020

Post 1991 liberalisation, the gap in the income of the farmers and non-farm worker has been growing wider reflecting that the benefits of the reforms in farm sector were too little and fragmented and could not boost the income of the farmers. India is likely to produce huge surplus of agricultural commodities in next 10

The infographic features a background image of a farmer in a field and Prime Minister Narendra Modi. It includes the 'my GOV' logo and the text 'सो सरकार'.

BEFORE REFORMS	AFTER REFORMS
Can sell notified farm produce only in APMC Mandi	Freedom of choice to sell in APMC mandi or choose any other seller
Monopoly of few	Multiple options to sell
Cartels of traders could keep prices artificially low	Better price realisation through competition

years (NITI Aayog, 2018)² much beyond the absorption capacity of the domestic market. The inadequacies of infrastructure and systems of present-day agricultural marketing system may not be able to handle this surplus. We need to become more competitive in terms of handling, storage, quality standards for the global export destinations in developed and developing countries. Besides, for import substitution of edible oils, fruits and nuts and other agricultural items, we require investment for post-harvest infrastructure, and logistics which has not been coming due to restrictive regulations of the APMCs/ECA. A market or aggregation centre close to production sites with some mechanism of price assurance can encourage the small and marginal farmers (SMF) to diversify towards high-value crops. Although, the negotiation time from production site to markets has reduced over time due to the road network development, the agriculture markets are too sparse and fragmented leading to glut and the price crash in some markets while shortage and high prices at major demand centres. Higher private investment could happen with reforms in agricultural market leading to price assurances and unabated flow of food items from centre of production to major centre of consumptions. The reforms will lead to creation of alternate channels of marketing and more competition in the transaction leading to transparent price discovery and better price realization to the farmers.

The agriculture census 2015-16 has put more than 86 percent farmers under small and marginal category with average holdings of 0.38 ha to about 68.5 percent farm households. This means the likely surplus with them for offering to sale is low and much low to approach any APMC mandi individually due to lack of economy of scale. It is noteworthy, that there are about 2560 principal market yards and 4393 sub-yards in the country. On an average one mandi serve about 472 sq km against the norm of one market yard at about 80 sq km area. The aggregators or kunjdas come to rescue to the small growers but they use to offer much less price to producers. These are none but the representatives of commission agents for vegetables like Tomato, Potato, Brinjals, Green Peas and fruits like Mango, Guava, etc. The well settled village merchants in the rural markets have been the aggregators

for staples since decades and the same system is operating even today except in some states where the public procurement has taken a deep dive to villages at least for rice and wheat. U.P., M.P. and Chhattisgarh are such States in the recent times. What is happening in the states/UTs like Kerala, Jammu and Kashmir, North Eastern States and in Bihar is everyone's guess. We need more markets to facilitate to reduce the time to negotiate these destinations and active and direct sale by the farmers rather than going the route of commission agent as has been happening in the APMCs. What would be more important, is to establish a robust and accountable market intelligence system packed with technology and well-trained scientific manpower to minimise the chances of any manipulation in the prices of the produce. The FPTC Act provides for the freedom to sell and buy farm produce at any place in the country, promote e-commerce and allows setting up of an electronic platform. It also offers the opportunity to the Government to intervene to regulate the system, if the new system fails to work satisfactorily. The FPTC Act, 2020 legalises all the transactions which were earlier put under the regulations and restriction by the APMCs. The direct purchase from the farmers at their farm as provided in the FPTC Act, 2020 will be empowering him to decide the price of his produce. The State must encourage FPOs to become aggregators and in due course they will become active price

The infographic features a background image of a farmer wearing a yellow mask and a portrait of Prime Minister Narendra Modi. The text is presented in a 2x2 grid format.

BEFORE REFORMS	AFTER REFORMS
Large price spread	Higher share of farmer in consumer's payment
Long chain of intermediaries	Minimum or no intermediary
No opportunity for farm youth to trade agri commodities	Rural farm youth will get opportunity to trade & run supply chain

negotiator rather than passive recipients of the price decided by the commission agents in the APMC mandis.

The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020

The major apprehensions about the Agreement on Price Assurance and Farm Services (APAFS) Bill 2020 is that corporates will take away the lands of the farmers forcibly by manipulating the agreement. This is highly imaginary and devoid of any facts. It is noteworthy that the old contract farming act was adopted by the 20 States. The APAFS Bill 2020 is an improvement over the old one. The APAFS Bill 2020 will facilitate an assured price to the farmers for his produce as mutually agreed between farmers and sponsor before the commencement of production operations, and the technologies, services and inputs on mutually agreed terms and conditions for the production of desired quality produce. Further, the sponsor's role is limited to buy the produce at pre-decided price as agreed in advance and supplying the quality inputs and services to farmers as per the contract. The sponsor neither permitted to lease-in the land of the farmers, nor he/she can erect any assets permanent nature on farmers' land or modifying it or acquiring the ownership rights. The physical boundaries of the farmers land will remain intact so is his ownership rights. The farmers will be the sole custodian of all production operations as well. In fact, the APAFS is historic in the sense that farmers have been empowered to not only negotiate for the price of his produce before production but for the first time in the history of Indian Agriculture, a farmer will dictate his terms for price settlement to a buyer. The contract farming with Nestle, for milk in Punjab's Moga district operating since 1961 could be an example to cite. Over one lakh farmers are associated with the contract. Nestle has been providing the technical guidance, feed, vaccines and veterinary services to milk producers. A high order supply chain has been established based on a pre-announced weekly price based on the fat and solid content in the milk. The assets of the farmers have not been taken by the MNC.

The Essential Commodities (Amendment) Act, 2020

The ECA has been modified for agriculture and food stuffs. The supply of the commodities

enlisted in ECA such as cereals, edible oils and oils can only be regulated under extraordinary circumstances like war, famine, extraordinary price rise and natural calamities. The transparent criterion has been laid down on imposing or regulating stock limits. This has inbuilt predictability in the Government's action by price trigger rather than mere perception as used to happen in the past. The Government can intervene in the market for price control under the amended act as well. The recent action in imposing the stock limit on onions in October 2020 is the testimony of such provision. The criticism that a free hand has been given to stockists and market manipulators is baseless. Further, the commodities like fertilisers and seeds, which are of much interest to farmers, have not been touched by the modifications. The modifications in ECA will encourage the big investment in creating much needed infrastructure like warehouses, cold storages, pack houses, and logistics. We must note that the gap between required and existing infrastructure is 70 percent in pack houses, 98 percent in reefer vehicles and 94 percent in ripening chambers (NCCD, 2015)³. By creating these infrastructures, much needed income to farmers will be augmented to a large extent.

The Farmers' Concerns

Last couple of months has been marked with the protests and agitation by the farmers in Haryana and Punjab and other States on

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BUSTING THE MYTHS ABOUT AGRICULTURAL BILLS

Myth	Fact
Big companies will exploit farmers in the name of contract	The contract agreement will guarantee the farmers to get the fixed price. Farmer can withdraw from the contract at any point without any penalty

the three Bills passed by Parliament on 20th September, 2020. These protests have settled two major consequences. First, the liberalisation in agriculture is not being allowed to be percolated well with the farmers on the grounds devoid of facts and imaginary. Two, the Government and all institutions need to engage seriously in communicating with the farmers for such a serious turn that has shaken the established system and traditionally deep-rooted relations between Adhathiya-Commission Agent and the Farmers. This relationship, over the years, worked beyond the price of produce and cemented as a social safety net and the adhathiyas are being projected as a savior when farmers are in distress, although, the farmers used to repay heavily for this so-called charity by the adhathiyas. Another argument is that primary market yards and sub yards under the APMCs have also been providing employment to millions of the landless and unemployed semiskilled and unskilled labourers. There is need to educate the farmers that APMC led mandi system of agriculture marketing, in India, has been opaque and monopolistic. The farmers were denied the access to participate in price discovery and the direct transaction. It was all in the clutches of the middleman and commission agents. The Government by enacting three Bills for agricultural marketing, contract farming and essential commodity, has tried to eliminate the unhealthy and exploitative rules and procedures. The APMCs not only remain functional as a platform for marketing of agricultural produce but will be strengthened and become more transparent due to increased competition which is a pre-requisite for a well-meaning market. The Government is committed to make investments for the alternative system for marketing, better than the existing ones, as provided in the new Acts. These provisions must be implemented with vigor and objectivity.

Conclusion

The States have to take these proactively and the Centre should provide matching grants, if needed for creating alternative mechanism. While the e-NAM and other initiatives will move on, most likely with the positive impact in long run, the immediate action should be creating the awareness amongst farmers about the positives of the amendments with some live examples and

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BUSTING THE MYTHS ABOUT AGRICULTURAL BILLS

Myth
Advantage to big corporates, loss to farmers

Fact
In many states, farmers successfully produced crops like sugarcane, cotton, tea, coffee along with large corporates. **Now small farmers to benefit from technology and equipment with guaranteed profits**

records of advantages based on the real learnings of the farmers themselves rather than annualised or derived data of the surveys and reports for which there seems to be a trust deficit for the reasons unknown to many. The 721 KVKs, one in each district, under ICAR-SAUs governance may offer a great service in connecting the farmers through the ICT platforms and other communication means. We should plan and launch a campaign for awareness on recent market reforms through KVKs aptly funded by Department of Agriculture and Farmers Welfare and supported by the State Governments.

Footnote

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Panchayati Raj System towards Changing Rural India

Sandip Das

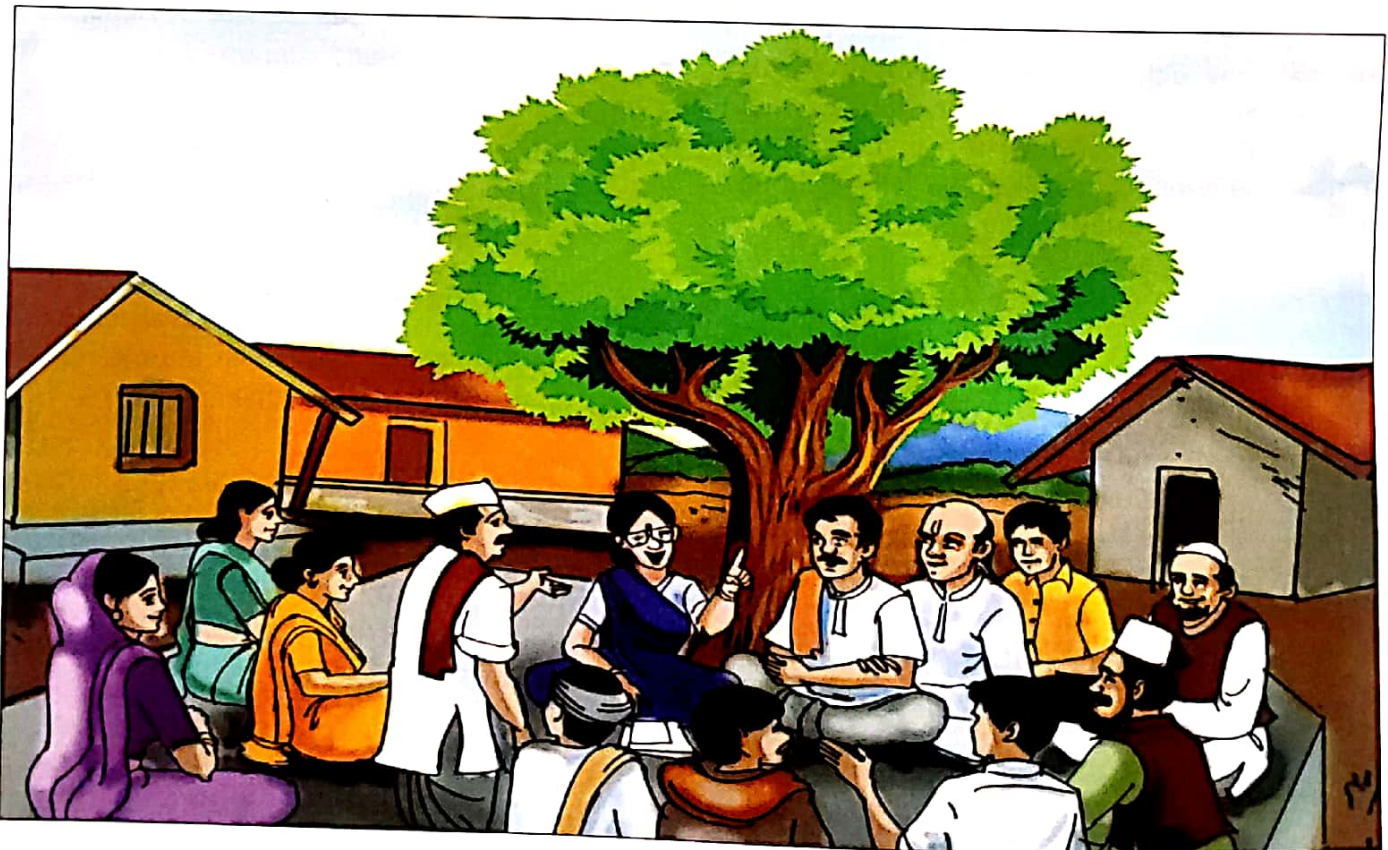
Since the Panchayati Raj Institutions (PRIs) got constitutional status in 1992, these institutions of local self-governance have taken major responsibilities of playing a critical role in implementing mega schemes of the government while ensuring people's participation in governance structure of the villages.

Panchayati Raj system has existed since ancient times in India. Villages used to have Panchayat (council of five persons) who would have both executive and judicial powers or authority to settle disputes in the village. The institution of Panchayat used to represent not only the collective will, but also the collective wisdom of the entire rural community. Father of the Nation Mahatma Gandhi advocated Panchayati Raj as the foundation of India's political system where a decentralised form of governance structure is established at each village. The term 'Gram Swaraj' (village self-governance) was the vision of Gandhi ji. He advocated empowerment of panchayats for the development of rural areas.

Recognising the importance of panchayats, the Constitution makers included provision of panchayats in the part IV (Directive Principles of State Policy) of the Indian Constitution. The Article

40 of the Constitution conferred the responsibility upon the state to take steps to organise village panchayats and endow them with such power and authority as may be necessary to enable them to function as units of self-government.

Just prior to India's independence, Bihar was the first to adopt the Panchayati Raj System in 1947 which was a similar system of local self-government started by Lord Ripon in British era. In the post-independence phase, the Balwant Rai Mehta Committee, headed by Member of Parliament Balwant Rai Mehta, was appointed by the Government in January 1957 to examine the work of the Community Development Programme (1952) and the National Extension Service (1953), to suggest measures to improve their work. The formal organisation and structure of Panchayati Raj was firstly recommended by Balwant Rai committee. The Committee, in



1957, recommended the establishment of the scheme of 'democratic decentralisation', which ultimately came to be known as Panchayati Raj. It recommended a three-tier system at village, block and district level and it also recommended direct election of village level panchayat. On October 2, 1959, Rajasthan (Nagaur district) became the first state to introduce the panchayat system in India.

In 1977, Ashok Mehta Committee on Panchayati Raj was appointed and in 1978 submitted its report with various recommendations to revive and strengthen the declining Panchayati Raj system in the country. Its key recommendations included two tier system of panchayat, regular social audit, representation of political parties at all levels of panchayat elections, provisions for regular election, reservation to SCs/STs in panchayats and a minister for panchayati raj in state council of ministers.

In 1985, G. V. K. Rao Committee recommended measures to strengthen Panchayati Raj Institutions (PRIs). In 1986, for the first time recommended for the constitutional status of PRIs and suggested for constitutional provisions to ensure regular, free and fair elections to the Panchayati Raj Bodies.

A legislation was introduced in the Lok Sabha by the then Prime Minister Shri Rajiv Gandhi led government in 1989 to constitutionalise PRIs, but the bill was not passed in Rajya Sabha. The then Prime Minister V P Singh led government also brought a bill, but fall of the government resulted in lapse of the bill. Subsequently, Prime Minister P V Narashima Rao led government introduced a bill for providing constitutional backing to PRIs in Lok Sabha in September, 1991. This bill was eventually known as the 73rd Constitutional Amendment Act, 1992 and came into force on 24th April, 1993.

Key Elements of 73rd Amendment Act 1992

A new part-IX to the constitution was added under the 73rd Amendment enacted in 1992. The Article 243G of the Constitution intended to empower the Gram Panchayats (GPs) by enabling the State Governments to devolve powers and authority in respect of all 29 Subjects listed in the Eleventh Schedule for local planning and implementation of schemes for economic development and social justice. Some provisions

Role of PRIs in Implementation of Mega Social Sector Scheme

MGNREGA: PRIs have key implementation role

The PRIs have been playing a critical role in implementation of Mahatma Gandhi National Rural Employment Guarantee (MGNREGA), since its launch in 2006. MGNREGA one of the largest employment generating schemes which provides alternative employment to the people in rural areas through providing guaranteed employment of 100 days to each rural household. The programme has 261 permissible works out of which around 164 types of works are relating to agriculture and allied activities including water conservation. The thrust of the government in creation of individual assets on water conservation and irrigation which would boost the agriculture sector. For strengthening the process of decentralisation, a significant role to PRIs in planning and implementing these works. For dealing with situation arising from COVID-19 spread, the permissible works under MGNREGA had been enhanced to 262 numbers by adding unskilled wage component of 230 person-days for construction of Community Sanitary Complexes in convergence with Swachh Bharat Mission (Grameen).

The Gram Sabhas has to recommend the works that are to be undertaken and at least 50 percent of the works must be executed by PRIs. PRIs are primarily responsible for planning, implementation and monitoring of the works that are undertaken. For 2020-21, Rs. 61,500 crore was initially allocated. However, for providing additional employment opportunities under AatmaNirbhar Bharat Abhiyaan for dealing with COVID19, the government has made additional allocation of Rs. 40,000 crore to MGNREGA. This allocation indicates enormous responsibility bestowed on the PRIs in implementation of mega schemes.

of this amendment are binding on the States and others have been left to be decided by respective State Legislatures at their discretion

Organisation of Gram Sabhas

- Creation of a three-tier Panchayati Raj Structure at the District (Zila), Block and Village levels
- Most of these posts at three levels to be filled by direct elections
- Minimum age for contesting elections to the PRIs is 21 years
- Only the post of Chairman at the District and Block levels should be filled by indirect election
- Provision for reservation of seats for Scheduled Castes and Scheduled Tribes in Panchayats, in

proportion to their population, and for women in Panchayats up to one-third seats

- State Election Commission to be set up in each State to conduct elections to PRIs
- The tenure of PRIs is five years, if dissolved earlier, fresh elections to be held within six months; and
- Creation of a State Finance Commission in each state every five years.

Some of the provisions which are not binding on the States, however, considered as only guidelines include giving representation to the members of Central and State legislatures in district and middle-level PRIs, provisions of reservation for backward classes and financial powers to PRIs such as taxes, levy fees etc.

Composition of Panchayats

PRIs were established as a three-tier structure based on direct elections at all the three tiers - village (gram panchayat), intermediate (panchayat samiti) and district (Zila Parishad). Exemption from the intermediate tier is given to the small States having less than 20 lakhs population.

The State Legislatures were expected to empower Panchayats with such powers and authority as may be necessary to enable the Panchayats to become institutions of self-government at the grassroots level. The functions which could be devolved to PRIs include preparing plans for economic development and social justice. Schemes of economic development and social justice with regard to 29 important matters mentioned in XI schedule such as agriculture, primary and secondary education, health and sanitation, drinking water, rural housing, the welfare of weaker sections, social forestry etc.

Three-tier Structure of Panchayati Raj

Gram Panchayat

The civic functions relating to sanitation, cleaning of public roads, minor irrigation, public toilets and lavatories, primary health care, vaccination, the supply of drinking water, constructing public wells, rural electrification, social health and primary and adult education, etc. are obligatory functions of village panchayats. Functions like preparation of annual development

PRIs' Critical Role in Jal Jeevan Mission

Role of PRIs has emphasised in implementation of Jal Jeevan Mission (JJM), a flagship programme launched by the Prime Minister Shri Narendra Modi in 2019, aims to provide all rural households with tap water supply in adequate quantity and of prescribed quality by 2024. JJM aimed at providing functional household tap connections to every rural household of the country by the year 2024. During the current fiscal (2019-20), Rs.8,050 crore have been made available to the States for implementation of JJM by the central government.

Following the spirit of 73rd Amendment of the Constitution, under JJM, local village community, Gram Panchayats and user groups are being involved in planning, implementation, management, operation and maintenance of water supply systems in villages to ensure long-term sustainability to achieve drinking water security. In every Gram Panchayat, the sub-committee- Village Water & Sanitation Committee or Paani Samitis have been constituted for planning at village level.

The role of gram panchayats has been to identify beneficiaries under the Pradhan Mantri Awaas Yojana – Gramin is a flagship scheme of the Government. The scheme provides assistance to BPL families who are either houseless or having inadequate housing facilities for constructing a safe and durable shelter.

Under the Centrally Sponsored Scheme - Rashtriya Gram Swaraj Abhiyan, which is being implemented from 2018-19 to 2021-22, with the primary aim of developing governance capabilities of PRIs to deliver on Sustainable Development Goals with the main thrust on convergence with Mission Antyodaya and emphasis on strengthening PRIs in the 117 Aspirational districts.

plan of panchayat area, annual budget, relief in natural calamities, removal of encroachment on public lands and implementation and monitoring of poverty alleviation programmes were expected to be performed by panchayats.

Panchayat Samiti

The second or middle tier of the Panchayati Raj is Panchayat Samiti, which provides a link between Gram Panchayat and Zila Parishad. The strength of a Panchayat Samiti also depends on the population in a Samiti area. In Panchayat Samiti, some members are directly elected. Sarpanchs of Gram Panchayats are ex-officio members of Panchayat Samiti. Panchayat Samitis are the main hub of developmental activities. Some functions

are entrusted to them like agriculture, land improvement, watershed development, social and farm forestry, technical and vocational education, etc.

Zila Parishad

Zila Parishad or district Panchayat is the uppermost tier of the PRIs. This institution has some directly elected members whose number differs from State to State as it is also based on population. Chairpersons of Panchayat Samitis are ex-officio members of Zila Parishads. Members of Parliament, Legislative Assemblies and Councils belonging to the districts are also nominated members of Zila Parishads. It prepares district plans and integrates Samiti plans into district plans for submission to the State Government. Zila Parishad looks after development works in the entire district.

Since the passage of 73rd constitutional amendment, there has been substantial progress in terms of implementing the key aspects of the legislation.

- All the states and UTs have passed conformity acts
- State Election Commissions have been established and regular elections have been conducted under their supervision in all States.
- State Finance Commissions have been constituted in all States and their recommendations obtained.
- Infrastructure and governance systems in panchayats across the country have improved significantly.

Devolution of Funds, Function and Functionaries to PRIs

The funds, function and functionaries that form the three main components of the devolution of power vary across states. A devolution report published by the Ministry of Panchayati Raj in 2015-

16, stated that devolution has two main aspects: the operational core that includes funds, function, functionaries, and the support system that includes capacity building of PRIs, operationalising constitutional mechanisms and introducing systems of transparency and accountability. In terms of devolving function, functionary and finance, Kerala, Tamil Nadu, Maharashtra, and Karnataka have performed better than other states. However, most of the states have made substantial progress in devolution of funds, functions and functionaries to PRIs.

Another critical aspect of legislation following the 73rd amendment was insertion of a clause under the article 280 (3) (bb) of the constitution that the Union Finance Commission would recommend measures to supplementing the resources of the Panchayats in the state on the basis of the recommendation of Finance

Commission of the State.

Rising Financial Devolution to PRIs

- Beginning with the Tenth Finance Commission (1995-2000), an amount of Rs.3576 crore was released to the States. The Commission did not have terms of reference for local bodies, but it recommended Rs.100 per capita grants to the rural population as per the 1971 Census to PRIs. It worked out to Rs.4380 crore to discharge the new roles assigned to PRIs.
- The Eleventh Finance Commission (2000-2005) recommended the grant of Rs. 8,000 crore for Panchayats. The untied grant was to be used for maintenance of accounts and audit followed by the development of a financial database. The remaining amount was to be utilised for maintenance of core services like primary education, health care, drinking water provision, street lighting and sanitation in the villages. During 2000-2005, Rs.6601 crore was released to the states.

- The Twelfth Finance Commission (2005-2010) had recommended Rs. 20,000 crore grants for the PRIs, against which an amount of Rs.18,926 crore was released to the PRIs in 27 States.
- The actual release of grants during the thirteen finance commission (2010-15) was Rs.58,256 crore, which was 89.4 percent of allocation.
- The grants of fourteenth finance commission (2015-20), had been to the tune of Rs.1,80,237 crore released for the Gram Panchayats in 26 states.
- For the period FY 2020-21, the Fifteenth Finance Commission has awarded a grant of Rs. 60,750 crore, for Rural Local Bodies (RLBs) in 28 states which has been the highest annual Finance Commission allocation for the RLBs so far.

On April, 24 (National Panchayati Raj Day), 2020, Prime Minister Shri Narendra Modi had launched a unified e-GramSwaraj Portal and mobile application and Swamitya scheme. The e-Gram Swaraj helps prepare and execute Gram Panchayat Development Plans. The portal will ensure real time monitoring and accountability. The portal is a major step towards digitization down to the Gram Panchayat level. The Swamitya scheme which is launched in pilot mode in six states helps to map rural inhabited lands using drones and latest survey methods. The scheme will ensure streamlined planning, revenue collection and provide clarity over property rights in rural areas.

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drones and latest survey methods. The scheme will ensure streamlined planning, revenue collection and provide clarity over property rights in rural areas.

“Every village has to be self-sufficient enough to provide for its basic needs,” Shri Modi had said. He also stated that the Government worked hard in trying to provide self-sufficiency to villages and making the Gram Panchayats stronger.

Since getting Constitutional status in 1992, PRIs have played a critical role in the development process of the villages. With the government relying more and more on PRIs for implementation of mega development programmes, PRIs have cemented their position in the rural governance structure.

Table

No of the PRIs in the country	2,76,718
No of gram panchayat	2,69,347
No of block panchayats	6717
No of district panchayats	654
No of elected members of PRIs	30.45 lakh
No of elected women representatives	13.79 lakh (45%)

Source: Ministry of Panchayati Raj, *areas not covered by PRIs (Meghalaya, Mizoram, Nagaland, parts of hilly areas of Manipur, Darjeeling and parts of Assam and Tripura)

The government has initiated several measures such as incentivising the states which have devolved more functions, funds and functionaries to PRIs, providing financial and technical assistance for capacity building to PRIs to enable them to perform the devolved functions effectively and strengthening systems of budgets, accounting and auditing for bringing in transparency, accountability and efficiency in the functioning of PRIs.

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Livestock: Key for Doubling Farmers' Income

Prof. K.M.L. Pathak

Animal husbandry has been the most important integral part of Indian agriculture system since ancient time. It provides livelihood to two-third of the rural population, especially the landless and marginal farmers. Doubling of farmers' income can only be possible, if animal husbandry is integrated into agriculture and allied sectors with salient policies and their effective as well as timed implementation.



Agriculture in India, since independence, is considered as the backbone of Indian economy and farming community is its spinal cord. The Indian agricultural system is the worlds' most diversified and complex system due to great variations in agro-climatic regions. In spite of this, more than 60–65 percent of the population is dependent on the agriculture and its allied sectors. Animal husbandry has been the most important integral part of Indian agriculture system since ancient time. It provides livelihood to two-third of the rural population, especially the landless and marginal farmers. That is why livestock is considered as a living bank for livestock owners and act as an insurance against natural calamities and crop failure. In the last two decades, livestock sector has emerged as one of the powerful economic engine in regulating Indian economy and livelihood

of rural and fast growing semi-urban population. The population explosion not only reduced the farm land availability but also has become less profitable for the farmers in India. Under this situation, livestock sector is showing huge potential for growth, investment, income and sustainability. Although the sector has only 5 percent share out of the total agricultural investment, still it is viable and exhibiting a promise for rising the income of farmers due to increase in the requirement of animal protein. In the past few decades, it has been observed that the growth of the agricultural sector and the income from it, is not up to the mark indicating a steady decline in the agriculture in contribution to GDP. On the other hand, livestock sector has substantially increased its share in the GDP and also showing further potential of acceleration particularly for the growth of rural economy.

As per the statistics, agriculture contributes 17 percent to India's total Gross Domestic Product (GDP), of which 27 percent comes from animal husbandry. Dairy, poultry and aquaculture contributes 4.4 percent to the nation's GDP, which symbolises the importance of the sectors, as it provides employment opportunities to over 16 million people across the country. The contribution of livestock industry is 29 percent of the value of the output from the total agriculture and allied sectors.

India's livestock sector is one of the largest in the world. As per the 20th Livestock census, India is the owner of about 512.05 million livestock population; first in the total buffalo population in the world - 105.3 million; second in the population of goats- 140.5 million; second largest poultry market in the world - production of 63 billion eggs and 649 million poultry meat; third in the population of sheep (72 millions); fifth in the population of ducks and chicken and tenth in camel population in the world. India has 56.7 percent of world's buffaloes, 12.5 percent cattle, 20.4 percent small Ruminants, 2.4 percent Camel, 1.4 percent Equine, 1.5 percent Pigs and 3.1 percent poultry. India has 36 recognized breeds of indigenous cattle, 12 of buffalo, 26 of goats, 42 of sheep, 11 of Pigs, 05 of Horses, 04 of camels, 02 of Mithun, 02 of Yak and 04 of poultry. The total Livestock population shows an increase of 4.6 per cent over the Livestock census 2012. Total Bovine

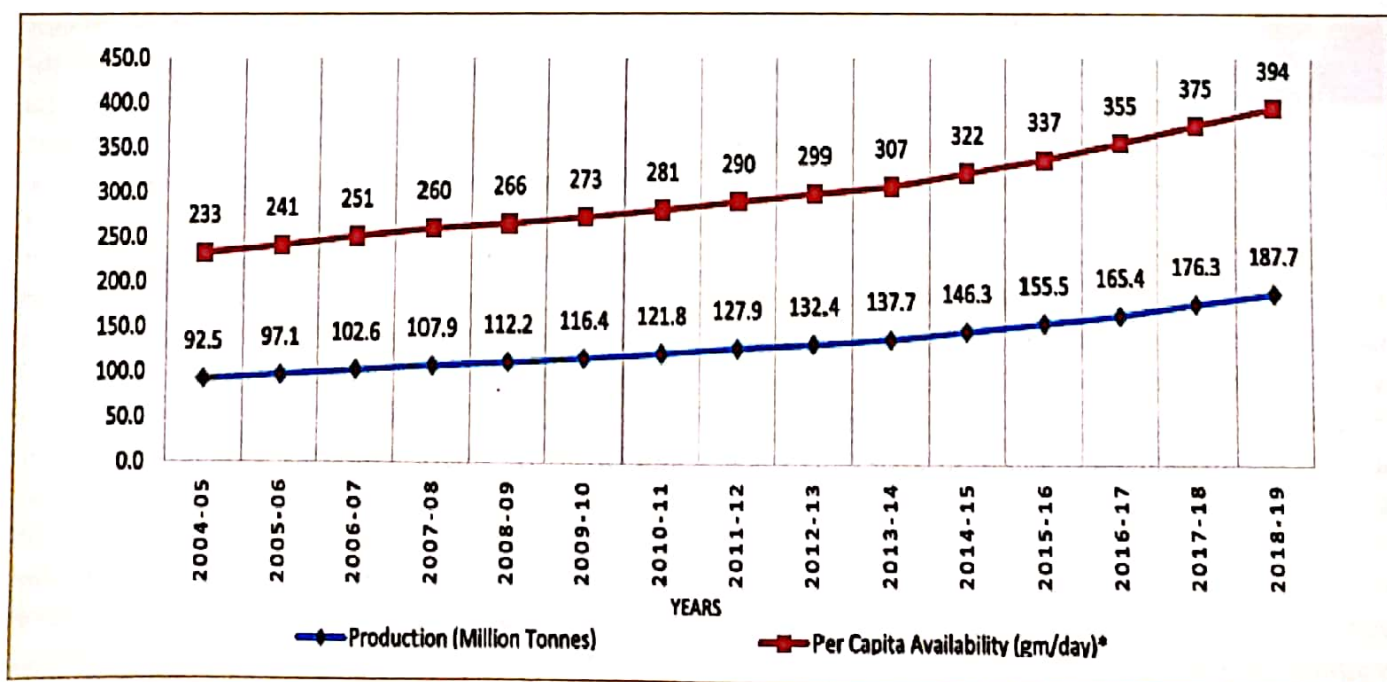
population including Cattle, Buffalo, Mithun and Yak is 302.79 million in 2019 which shows an increase of 1.0 per cent over the previous census. The total number of Cattle in the country is 192.49 million in 2019 showing an increase of 0.8 percent. The female Cattle is increased by 18 percent. The indigenous/non-descript female Cattle population has increased by 10 percent in 2019, while the population of exotic/cross-bred Cattle has increased by 26.9 per cent in 2019. There is a decline of 6 per cent in total indigenous Cattle population.

In 2010-11, livestock generated outputs worth Rs. 2075 billion (at 2004-05 prices) which comprised 4 percent of the GDP and 26 percent of the agricultural GDP. The total output worth was higher than the value of food grains. About 20.5 million people depend upon livestock for their livelihood. Livestock contributed 16 percent to the income of small farm households as against an average of 14 percent for all rural households. It also provides employment to about 8.8 percent of the population in India.

Following paragraphs will highlight the key strength of livestock and how it can be targeted toward doubling the income of the farmers.

The basic statistics released by the Department of Animal Husbandry and Fisheries have shown some of the interesting prospects in animal husbandry sector and these data are

Fig 1: The Milk Production Trend (Million Tonnes) and Per Capita Availability of Milk (gm/day) in India



suggestive of great potential of livestock sector in doubling farmers' income. The total milk production by 70 million farmers in the country is 187.75 million tonnes and there is an increase of 6.5 percent in milk yield compared to previous years. Along with this, milk production from exotic and crossbred cattle has increased 8.7 percent compared to the previous year and in indigenous cattle, it has been increased by 5.7 percent compared to previous year. These data are suggesting the probability of sustainable animal production system. The following graph is showing the milk production trend along with the per capita availability of milk (Adapted from BAHS, 2019).

Similarly the milk production has been increased and the annual growth of milk yield has been increased. In 2018-19, milk production has recorded a growth of 6.5 percent.

The following graph is showing the trend in the annual growth in milk production in the last ten reference years (Adapted from BAHS, 2019).

According to 2019 BAHS, the total egg production in the country is 103.32 billions which was increased by 8.5 percent compared to the previous year. Along with this, the per capita availability of egg has been increased to 79 per year in the year 2019 compared to 74 in 2018.

Fig 2: Trend in the Growth of Milk Production (%) in the last Ten Years

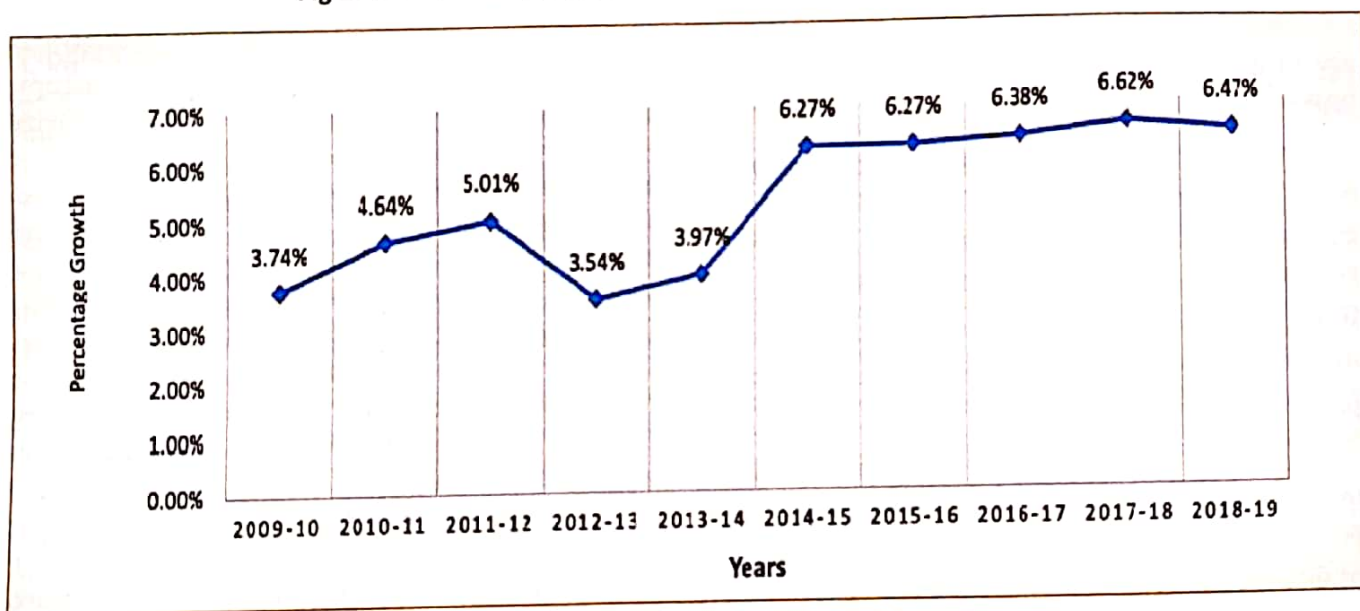


Fig 3: The Egg Production Trend (billion) and Per Capita Availability of Milk (number/annum) in India

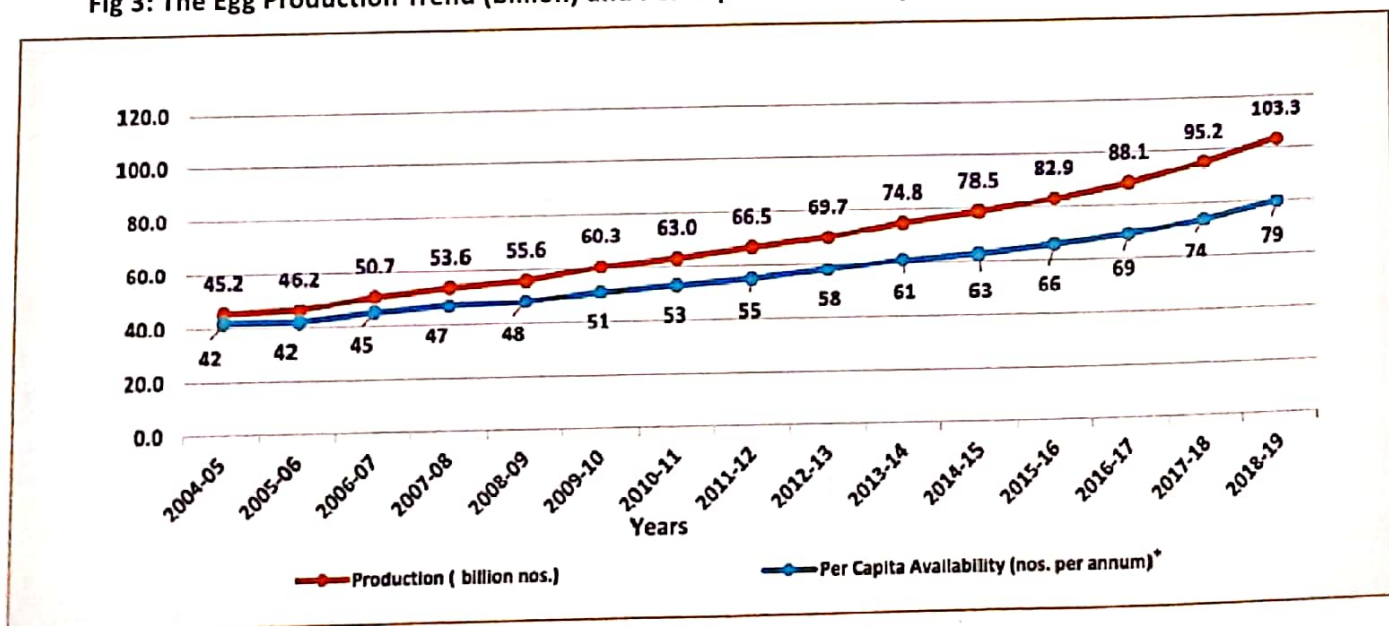
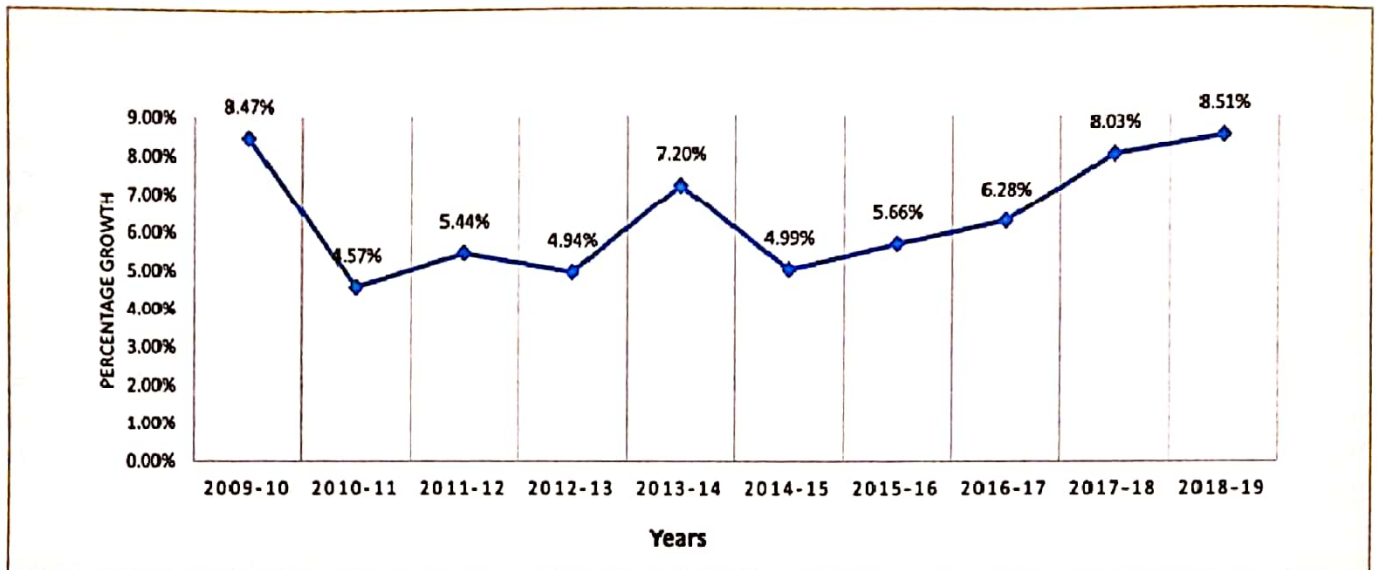


Fig 4: Trend in the growth of egg production (%) in the last ten years



The following two graphs show the trend of egg production and its availability (Adapted from BAHS, 2019).

The total meat production in the country is 8.11 million tonnes which is 6 percent higher compared to the previous year and the annual growth in meat rate is steadily increasing at the rate of 5 percent.

The figures below depict the trend of meat production in the last decade.

Looking to the strength and potential of Indian livestock in the rural development, the Prime Minister has initiated a flagship programme of doubling farmers' income by 2022. The strategy

recommended by the NITI Aayog in 2018 identified seven sources of doubling farmers' income including improvement in livestock productivity. The dream of the Prime Minister is being achieved with the close involvement of livestock sector along with the agriculture. To promote livestock and fisheries sector, the Government of India, in 2019, created a new Ministry by merging the Department of Animal Husbandry, Dairy Development and Department of Fisheries and renamed as Department of Animal Husbandry, Dairying and Fisheries. To achieve the objectives of doubling the farmer's income through Livestock sector, the Government of India has launched several schemes/programmes viz., Rashtriya Gokul Mission, National Animal Disease Control

Fig 5: The Meat Production Trend (million tonnes) in India

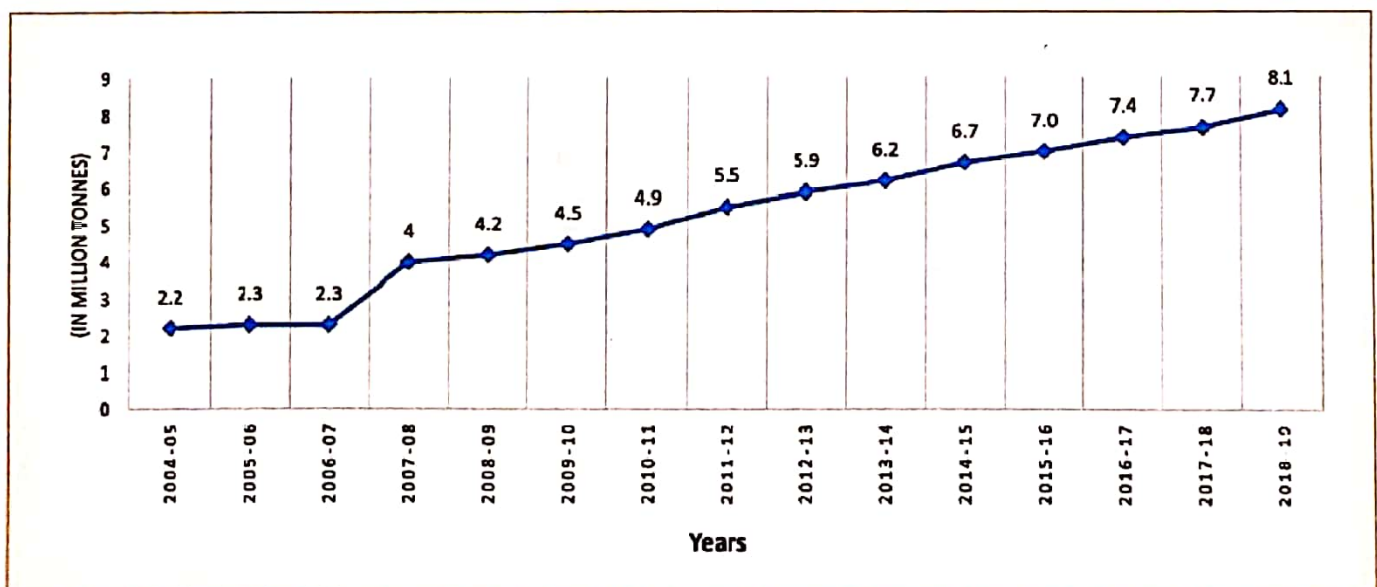
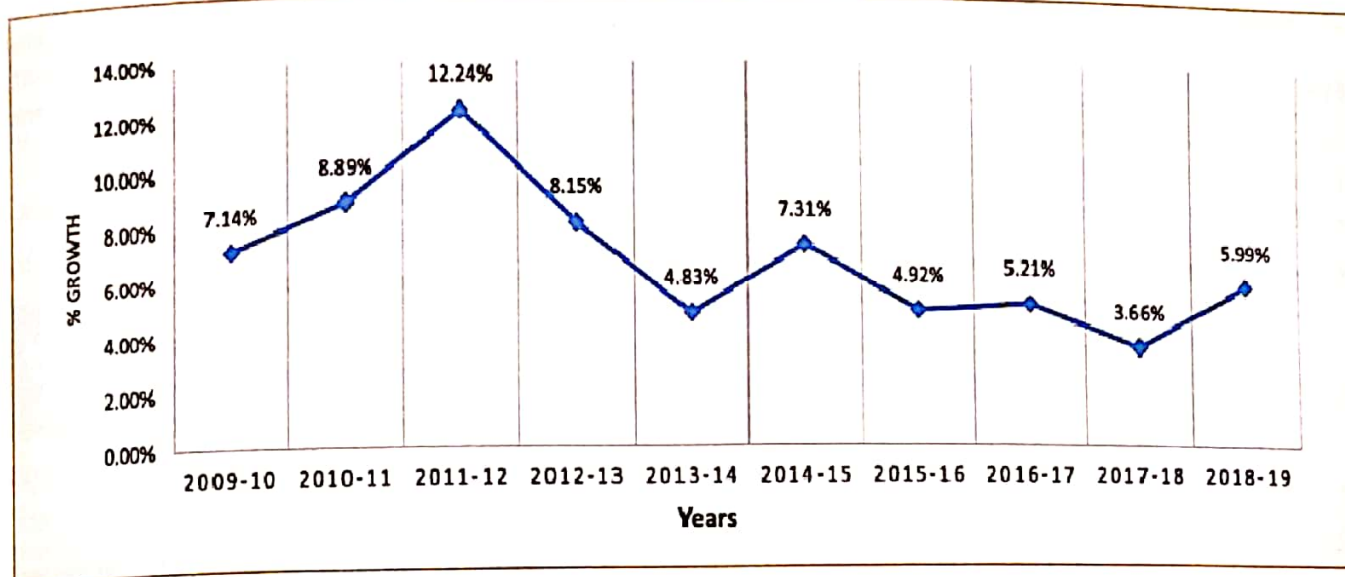


Fig 6: Trend in the Growth of Meat Production (%) in the last ten years.



Programme, Animal Husbandry Infrastructure Development Fund, Dairy Processing and Infrastructure Development Fund and National Programme for Dairy Development. The Union Government is investing significantly for improving animal health practices in the country. Thus, a strong foundation has been laid for livestock sector in the country and this will be further targeted to enhance over all socio-economic status of farming community.

Challenges in Livestock Sector

There are several challenges being faced by livestock sector which can be effectively filled to increase farmers' income.

- Large population of low-producing cattle (non-descript) is a big challenge, therefore genetic upgradation for improving annual milk yield of these non-descript animals is required.
- Breeding strategies with almost negligible pedigree record are the major hurdles of breed upgradation and animal selection for better productivity.
- Availability of pedigreed Bulls of indigenous cow.
- Infertility in Bovines
- Inadequate coverage of artificial insemination services along with qualified technical man power, particularly in rural and hilly areas
- Chronic shortage of feed along with quality of fodder is major obstacle for enhancing animal productivity, the country remains deficit in dry fodder by 10 percent, in green fodder by 35 percent and in concentrate feed by 33 percent.
- Escalating price of feed ingredient like maize
- Diversion of animal feed and fodder ingredients for industrial and human use
- Inadequate disease control programmes including deficiency of vaccines of major diseases like FMD, Brucellosis, HS, BQ, PPR, infertility, parasitism and emerging diseases like IBR and Blue Tongue.
- Low interest of youth in animal husbandry because of low market place and lack of knowledge in the area of value addition of livestock products.
- Lack of proper policy and awareness resulted in reduced participation of rural mass in commercial animal husbandry practices.
- Poor policies for investment in livestock sector has been another obstacle. Only 5 percent of the total money has been invested in livestock and this window requires more funding to pace the momentum of animal husbandry.
- Low milk price with increased feed cost
- Non-availability of chilling facility of milk in rural areas
- Inadequate availability of credit.
- Poor access to organised market.

- Limited animal insurance coverage
- Stray cattle menace

Future Roadmap

Now, let us talk about the animal husbandry sector and how it can play the pivotal role in enhancing the income.

- Enhancing the unit production of milk, meat and egg with better feeding, breeding and management practices.
- Availability of affordable and quality feed and fodder through out the year
- Use of sex sorted semen for getting female animals.
- Artificial insemination using semen from pedigreed bulls
- Effective and regular health coverage including timely vaccination
- Diagnosis of sub-clinical forms of diseases particularly sub-clinical mastitis to reduce the unit cost of animal production and health.
- Integrated farming system along with implementation of biotechnology and its tool in animal production system
- Commercialisation of super ovulation and oestrus synchronisation practices in small animals.
- Value addition of animal products and their effective marketing.
- Proper marketing of milk along with establishment of Panchagavya units in rural areas.
- Extensive establishment of Biogas units and commercialisation of organic farming system
- Integration of animal husbandry with fisheries
- Establishment of cooperative units and ease in marketing and getting proper value of animal products
- Introduction of incentive for farmers for animal husbandry practices
- Treatment of anoestrous and repeat breeders and reducing the inter-calving period
- Encouraging the rearing of indigenous cow
- More emphasis on green fodder production
- Bridging the gap between the farmers and the market; farmers and the government; and farmers-market and the government and private-cooperate involvement
- Strengthening of veterinary extension services
- Execution of livestock related schemes run by central/state government for the benefit of farmers
- Ensuring marketing of animal products at the best profitable rate
- Fast, ease and prompt financial assistance from cooperative society/ banks to livestock farmers
- Promotion of sustainable dairy farming system that allow proper and efficient use age of the resources, without being over-exploited.
- Attraction of rural youth and women in animal husbandry enterprises.
- Strengthening of veterinary and para-veterinary infrastructure
- Greenhouse gas management

Concluding Remarks

Doubling of farmers' income can only be possible if animal husbandry is integrated into agriculture and allied sectors with salient policies and their effective as well as timed implementation. Livestock sector requires adequate funding and its upgradation. There is a need to strengthen animal husbandry practices with more involvement of youth and private units for funding. It is the time to achieve more conception and reducing the age of puberty; have strategies for the diagnosis of subclinical diseases and wider coverage of vaccination system. The artificial insemination (AI) coverage should increase and use of sex sorted semen for high producing female animals may be ensured. Along with this, value addition to animal products is highly essential to get higher price compared to non-value added products. The integration of animal husbandry with agriculture will definitely help to accomplish the objectives of doubling the farmer's income by 2022.

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Rural Healthcare in India

Pankhuri Dutt

Healthcare is like a public good that is highly associated with a country's economic growth. As we move towards gaining from our demographic dividend in the next 20-30 years, we must ensure quality and timely delivery of services across the country. The National Rural Health Mission of 2005 has been rightly expanded to provide healthcare services to the urban poor who are under-nourished and under-served as well. However, the rural focus of the programme has gaps that must be bridged.

In Colonial India, most public health efforts were directed towards British residents and Indians who worked for them. As a result, Colonial India was marred with outbreaks of malaria, plague, small-pox, and cholera. In addition to limited access to health services, Indians were also kept away from medical education and serving as mainstream doctors. India's traditional medical practices like Ayurveda and Unani with services of Vaidya and hakims were neglected for an exceptionally long time and suffered due to lack of funds and were constantly projected as inferior by western medicine practitioners. Consequently, the empirical standing of these practices also diminished over time. Along with the idea of an independent India since 1930s, came concerns about the national health. India's public health had suffered immensely under the colonial rule and in a first, Indians were discussing the role of state in welfare and public health. The Government of India Act of 1935 gave more power to the provinces where provision of

medical care and preventative health services became state subjects, but once again, the actual implementation suffered due to lack of funds and poor capacity. Despite years of reform and efforts, in 1983, the Government of India's first National Health Policy acknowledged that the efforts to expand western healthcare services had benefited only the upper- class people and failed to serve the urban poor or those in rural India. The policy recommended a decentralised health care system, encouraged community participation, and invited private sector participation. Moreover, inequality in access to health services increased where women, young children, and elderly were found to have higher levels of morbidity rates. Level of education was found to be inversely related with prevalence of morbidity among different classes of people. Empirical evidence also suggests that poor socio-economic conditions, low education levels, limited exposure to media and lack of health services in rural India were the reasons why they had lower and under-reported morbidity numbers (Ghosh & Arokiasamy, 2009).



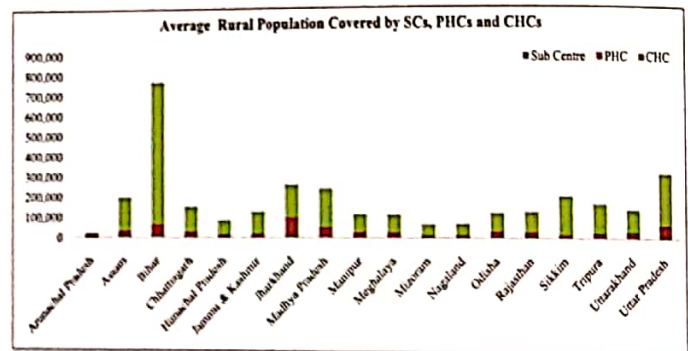
It is with this background that the National Rural Health Mission was launched in 2005 after careful deliberation and thought. Because health care is a state responsibility, the central government can play a supplementary role only. Through Centrally Sponsored Schemes the central government can launch national level health programmes. This was also the time when the Millennium Development Goals (MDG) were declared. The Central Government took this opportunity to provide a guideline to states for the proper allocation of funds to health expenditures to help them meet the MDG targets at a national level while also decrease inter-state disparities in health outcomes in rural India (Berman and Ahuja 2008). It also aimed to strengthen the financial management structure and accounting systems at all levels. (NAHC 2013). It was a bottom-up approach where the onus and focus of health care delivery was on the villages and went up till the district level. The principles were to provide states with adequate and flexible financing and allow them to design their own health interventions for health service delivery in rural India towards common, defined goals. The idea was to communitise, i.e., devolve funds, functions, and functionaries to local community organisations and Panchayati Raj Institutions (PRIs); improve capacity and management of rural healthcare systems; monitor progress of states against standard health parameters; and encourage innovation in human resource management in the sector. The socioeconomically backward states of Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttaranchal, and Uttar Pradesh, known as the Empowered Action Group (EAG) states, the north-eastern states, Himachal Pradesh and the then state of Jammu and Kashmir were the focus states. In 2013, NRHM became a sub-mission under the over-arching National Health Mission with the addition of National Urban Health Mission (NUMH) as the other sub-mission of the programme.

Coverage and Access for Rural Healthcare

Rural healthcare delivers services through a three-tier system of sub-centers (SC), primary health care centers (PHC) and community health centers (CHC). While SCs are the first point of contact in the primary health care system and the community in a rural set-up, PHCs serve as the first point of contact between the community and

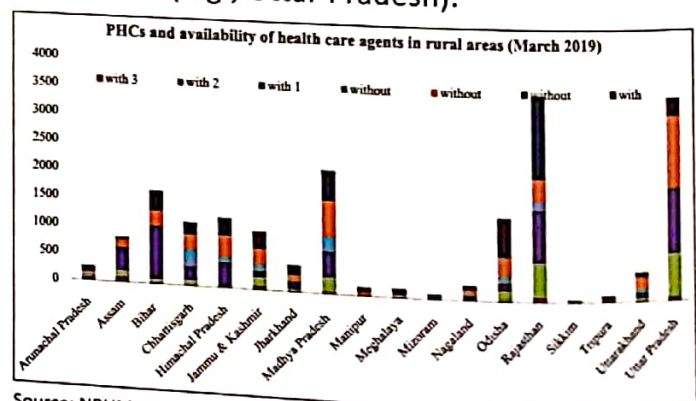
a medical officer. The CHCs provide specialised medical care through surgeons, obstetricians and gynecologists, physicians, and pediatricians.

Coverage of population with adequate health care centers was improved through an increase in the number of sub-centers (SC), primary health care centers (PHC) and a community health centers (CHC). Between 2005 and 2019, there was an increase of 7.8 percent in the number of SCs, 7 percent in PHCs and 59.4 percent in CHCs. As on March 30, 2019, on an average, 5,616 people in rural areas were covered by sub-centers, 35,567 people in rural areas were covered by PHCs, and 165,702 people in rural areas were covered by CHCs. Among the low performing states, Bihar had the highest average population coverage through all such facilities.



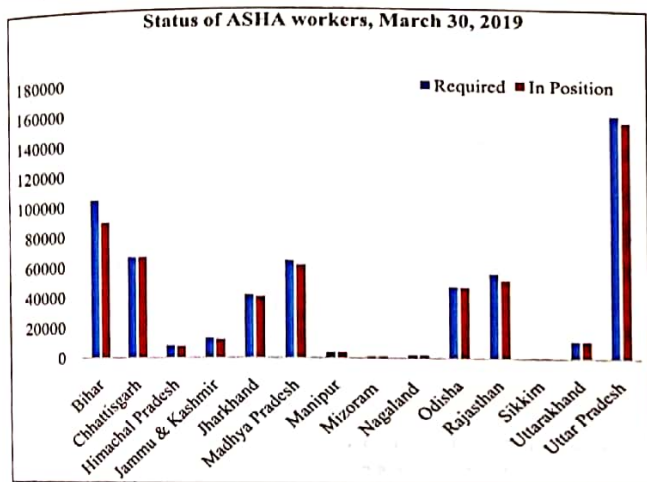
Source: NRHM

Access to health care agents was another big challenge that was addressed through NRHM. As of March 30, 2019, 9 States among the low performing ones had 700 functioning primary health care centers (PHCs) with more than 4 doctors. 15 of these states had 590 centers with at least 3 doctors, and all states had at least 2 doctors in their PHCs. All such states also had a lady doctor in 5,156 PHCs. However, there are still a few states with PHCs without a doctor (e.g., Chattisgarh), or a technician (e.g., Rajasthan), or a pharmacist (e.g., Uttar Pradesh).



Source: NRHM.

Accredited Social Health Activist (ASHA) is a grassroots level health worker who is selected from a village to serve that village. The success of several programmes under the NRHM lies on the shoulders of ASHA network. The ASHA works as a liaison between the local rural community and the public health system. They are educated, young members of the rural community who undergo rigorous and continuous training and development to serve the rural community better. They share information on basic health and hygiene practices; counsel women on child birth and related issues and act as the first point of repository of basic health kits. As of March 30, 2019, there were 9.29 lakh ASHAs in the country, which is 34,175 more than the required numbers. However, the weaker states still had a small gap between the required number of ASHAs and the number in position.



Source: NRHM

Some Programmes for Rural Health Care

Janani Suraksha Yojana is a cash incentive programme designed to encourage women to use formal healthcare services for institutional deliveries. The objective is to reduce neonatal and maternal mortality among poor, pregnant women, especially those in rural India. For this initiative, the focus states, called Low Performing States are Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam, Rajasthan, Orissa, and Jammu and Kashmir. All other states are called High Performing States (HPS). While all pregnant women who chose to deliver in government health centers like Sub-Centers, Primary Health Care Centers etc. or accredited private institutions, are eligible for this initiative in the low performing states; high performing states focus on all BPL/Scheduled Caste/Scheduled Tribe (SC/ST) women.

In rural areas, the cash incentive amounts to Rs. 1400 in LPS and Rs. 700 in HPS. Additional aid through designated ASHA workers amounts to Rs. 600 more. Janani Shishu Suraksha Karyakram was launched in 2011 to eliminate the out-of-pocket expenditure for both pregnant mothers and sick infants upon accessing institutional health care. High out-of-pocket expenditures often dissuaded women from seeking formal health services post delivery or for neonatal care. This programme provides free drugs, consumables, free diagnostic, free blood and free diet for 3 days during normal delivery and 7 days for caesarian section deliveries. This initiative also covers all ante-natal and post-natal emergencies. Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) was a similar programme launched in 2016 to provide quality antenatal care, free of cost and universally to all pregnant women on the 9th of every month in their 2nd and 3rd trimesters of pregnancy, that can be availed at all government facilities. It also engages with the private sector to create campaign awareness and participation. Under this programme, a minimum package of free antenatal care services is provided to pregnant women in their 2nd or 3rd trimesters, by OBGY specialists/ Radiologist/ Physicians at Govt. health facilities, with voluntary support from private Practitioners at Govt. Health Facilities, to ensure that every pregnant woman has a risk-free pregnancy.

While the efforts of JSY and other schemes improved the number of institutional deliveries from 38.7 percent to 78.9 percent in the 10 years from 2005 to 2015, the maternal and newborn mortality rates were not affected significantly. Accordingly, Laqshya or the Labour Room and Quality Improvement initiative was launched in 2017 to as a focused and targeted approach to strengthen key processes related to the labour rooms and maternity operation theatres. The objective was to achieve time bound targets and ensure desired outcome of an institutional delivery that ensured new mothers and newborn babies were safe and health.

Special Newborn Care Units (SNCUs) were established at district levels and sub-district level hospitals with an annual load of more than 3000 to provide care for sick newborns who did not need assisted ventilation or major surgeries. At the PHC level, this initiative provides newborn

care corner, which is a designated space within the health facility where deliveries are taking place i.e. Labour Room and Operation Theatres. In addition, there are newborn stabilising units provide for resuscitation, oxygen, suction, warmth through trained medical staff for all referral cases from SCs, PHCs and CHCs.

The Rashtriya Kishore Swasthya Karyakram targets adolescents between the age of 10 to 19 years. This group constitutes 22 percent of the Indian population. Investments in this group are to ensure their proper physical, biological and psychological development along with psycho-social, behavioral and sexual education relevant and needed for this age. The aim is to provide adolescent-friendly health care services to improve nutrition, mental health, sexual and reproductive health, prevent injuries and violence, substance abuse and non-communicable diseases. Similarly, the Rashtriya Bal Swasthya Karyakram screens children under the age of 18 for four birth deficiencies - Defects at birth, Diseases, Deficiencies and Development Delays including Disabilities. It has made significant impact on reducing the child mortality rates under the NRHM by ensuring timely interventions and at the same time reducing the out-of-pocket expenditures. Its key objectives are assessment of health status of the child, early detection of children with defects at birth, disease, deficiency in nutrition and disability, management of the identified children at primary, secondary and tertiary level, effective referral system by involving parents, proper and complete follow-up, health awareness among parents and children, trainings and capacity building of health providers, and convergence with stake holder departments (Education, SSA, RMSA, WCD and Social Justice and Empowerment).

The rural health care system also has family welfare initiatives that deliver family planning management services, education and use of contraceptives, menstrual hygiene schemes, sterilisation services and awareness campaigns through public programmes. To strengthen the national immunisation programme, the government has initiatives like the Teeka Express, which is a mobile van that provides vaccine services in far reaching areas along with construction, and safe operation of cold chains points for storing vaccines; routine immunisation and training of field volunteers and medical staff, among other provisions.

Anemia is a cause of concern among rural Indian population and according to reports, 514 districts in India, have prevalence of anemia in more than 40 percent children between the ages of 6-59 months. Similarly, 139 districts have prevalence of anemia among more than 40 percent of women of reproductive age while 65 districts have prevalence of anemia among pregnant women between the ages of 15 and 49. Anemia Mukh Bharat targets new borns and infants, school age children, adolescent boys and girls, women of reproductive age, pregnant and lactating women. It uses 6 interventions – provision of folic acid supplements, deworming, year-round behavior change initiatives, communication campaigns, text alerts, mandatory provision of folic acid fortified foods in public health programmes and addressing non-nutritional causes of anemia in endemic pockets like malaria and fluorosis. In addition, to the initiatives mentioned here, a large part of the national health mission is dedicated to strengthening health care capacity in rural areas, improving the operational efficiency of initiatives, improving fund flow, and creating awareness about public health programmes.

The National Rural Health Mission of 2005 has been rightly expanded to provide healthcare services to the urban poor who are under-nourished and under-served as well. However, the rural focus of the programme has gaps that must be bridged. To begin with, focus on incentivising medical staff to serve the rural community is a starting point to ensure all programmes are efficiently delivered. Moreover, instead of launching new programmes frequently, the mandates and budgets of existing programmes can be expanded instead. This creates an opportunity for better fund allocation and staff management. ASHA network, that has played a crucial role in health care delivery to rural areas has to be optimally compensated and trained. Private sector participation options, for service delivery and management services have to be explored. Majority of the Indian population continues to live in rural areas. Healthcare is like a public good that is highly associated with a country's economic growth. As we move towards gaining from our demographic dividend in the next 20-30 years, we must ensure quality and timely delivery of services across the country.

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Importance of Infrastructure in Rural Development

Dr. Krishna Dev

Infrastructure is the backbone of any country. It plays a very important role in supporting nation's economic growth and the same is the case with India. Rural infrastructure provides essential production conditions which is required for social and economic growth and for promoting the quality of life in rural areas.

Rural development means sustained improvement in the well-being of rural people and a strategy designed to improve the economic and social life of a group of people thus the rural poor. It involves the extension of benefits of development to the poorest among those seeking livelihood in the rural areas and this group may include small scale farmers, tenants and the landless; and to this many efforts have been made to develop infrastructure in rural areas.

Infrastructure is the backbone of any country. It plays a very important role in supporting nation's economic growth and the same is the case with India. When we talk about rural infrastructure in the country, then it is crucial for agriculture, agro-industries and poverty alleviation in the rural areas. Rural infrastructure provides essential production conditions which is required for social and economic growth and for promoting the quality of life in rural areas. The development of rural areas is slow due to improper and inadequate provisions of infrastructure as compared to urban areas.

The government's effort is to reduce poverty and increase the quality of life of the rural poor by introducing various major and minor schemes and programmes related to rural infrastructure. This comprises of transport including rural roads bridges; water and sanitation which includes irrigation (dams, channels, embankments, etc.), waste management, water supply etc.; communication including telecommunication and telecom services; and social and commercial infrastructure viz. housing, education, sports, hospitals, tourism and post-harvest storage infrastructure for agriculture.

Roads in Rural India

Roads in rural parts of the country are very important and critical component of rural development. It is the key to success of the rural economy; rural health; education; and for better road connectivity with the rest of the world. It is the main component to reduce the rural poverty by increasing the agricultural income. As far as construction, maintenance and upgradation of rural roads are concerned, since Independence, the major policy decisions had been made only for



the highways and urban roads but not for the rural roads. Though, rural roads had been constructed under various different schemes but till the year 2000 there was not a single national policy to construct only rural roads especially with the all-weather roads for the unconnected habitations.

It was the first time since independence, on 25 December 2000, the Government of India had launched the Pradhan Mantri Grameen Sadak Yojana (PMGSY) with the aim to provide all weather access to eligible unconnected habitations. It is a 100 percent centrally sponsored scheme (CSS) which cover only rural areas, and urban roads are excluded from the preview of this programme.

PMGSY-I: Under PMGSY-I, the aim of the scheme was to provide access to the eligible unconnected habitations in the rural areas with a population of 500 persons and above (census 2001) in plain areas. In respect of Special Category States i.e. hilly and desert areas; the tribal areas, the objective is to connect eligible unconnected habitations with a population of 250 persons and above. For most intensive integrated action plan (IAP), blocks as identified by the Ministry of Home Affairs, the unconnected habitations with population 100 and above are eligible to be covered under PMGSY-I.

PMGSY-II: However, as the programme unfolded, a dire need to consolidate the entire rural roads network by upgradation of selected routes and some major rural links was felt and accordingly a new intervention has been evolved which is namely PMGSY-II.

Under PMGSY-I, out of the targets fixed under new connectivity as well as up-gradation, over 70 percent of the projects have been sanctioned and about 93 percent proportion has been completed. However, the roads, both taken under the PMGSY-I as well as other schemes for rural roads, have not received the desired attention on the maintenance front for a number of reasons, which includes low contracting capacity, poor maintenance practices, inadequate feeling of ownership of the newly created roads at the State level etc.

The need for maintenance and consolidation of existing rural roads network has been stressed at various fora, such as XII and XIII Finance Commission and the Working Group on Rural Roads for the 12th Five Year Plan. In this backdrop,

the need for consolidation of the existing network was felt, to ensure that it fulfills the primary objective of connectivity for the local community and enables economical transportation of goods and for services to provide better livelihood opportunities as a part of poverty reduction strategy. This programme called PMGSY-II aims to cover up-gradation of existing selected rural roads based on their economic potential and their role in facilitating the growth of rural market centres and rural hubs. Development of growth centres and rural hubs are critical to the overall strategy of facilitating poverty alleviation through creation of rural infrastructure. Growth centres/rural hubs would provide markets, banking and other service facilities, enabling creation of self employment and livelihood opportunities on an ongoing basis.

PMGSY-III: The implementation of ongoing PMGSY-I and PMGSY-II as also construction and up-gradation of non-PMGSY rural roads by states under their own programmes has helped immensely in lifting the income of rural masses. It has also enabled creation of a regional absorption capacity of rural works departments and state public work department (PWDs), structure and procedure for implementation including quality assurance arrangements. The Union Finance Minister in the budget speech in 2018 made the statement that the "task of connecting all eligible habitations with all-weather road substantially completed, it is the target date brought forward to March, 2019 from March, 2022. It is now time to strengthen and widen its ambit further to include major link routes which connect habitations to agricultural and rural market (GrAMs), high secondary schools and hospitals. PMGSY Phase-III will include such linkages."

The Phase-III envisages consolidation of the existing rural road network by upgradation of existing through routes and major rural links that connects habitations to Grameen Agricultural Markets (GrAMs), higher secondary schools, and hospitals. The government is keen to facilitate easy and faster movements to and from the food processing centres, to Mandis (Agricultural markets) and other farmer related enterprises. This not only helps the farm production, but also yields many direct and indirect benefits such as minimising the spoilage

of perishable goods like fresh fruits and vegetables and ensures adequate remunerative prices for them. Such a facility ultimately leads to increased agrarian economy and helps in the development of the region, creating multiple opportunities in wage and self employment.

Affordable and easy access to high schools and higher secondary schools is the need of the hour in the present technological improvements in all sectors. Education leads to multiple opportunities. Improved access to education centres helps in better school attendance and the enthusiasm to go for the further higher level of education.

In a big country like India without the health accessibility, the country cannot achieve the goal of millennium development goals (MDGs) and sustainable development goals (SDGs); affordable and easily accessible health facilities is the prime focus of the government for which road connectivity plays an important role. All-weather roads have shown a very positive correlation to improvement in health indicators.

According to latest figures made available by the State Governments under a survey to identify Core Network as part of the PMGSY programme, about 1.67 lakh Unconnected Habitations are eligible for coverage under the programme. This involves construction of about 3.71 lakh km of roads for New Connectivity and 3.68 lakh km under up-gradation.

The physical progress made under the PMGSY is really commendable. Phase-I and II had made very good progress while Phase-III is lagging behind and this may be due to the COVID-19 pandemic where most of the construction activities has been stopped for longer duration. The detailed progress is given in Table-1 and Table-2.

Energy

Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY): The Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) was launched in 2015 with two components (i) to separate agriculture and non agriculture feeders facilitating judicious rostering of supply to agricultural and non-agricultural consumers in rural areas and (ii) strengthening and augmentation of sub transmission and distribution infrastructure in rural areas, including metering of distribution transformers/feeders/consumers end, and (iii) rural electrification for completion the target laid down under Rajiv Gandhi Grameen Vidutikaran Yojana (RGGVY) for 12th and 13th Plans by subsuming RGGVY in DDUGY. The detailed progress is given in Table-3.

LPG Connections to Poor Household: With the tagline "Swachh Indhan, Behtar Jeevan", Union Government launched a social welfare scheme "Pradhan Mantri Ujjwala Yojana" (PMUY) on 1st May 2016. The scheme is providing clean cooking fuel to poor households, especially in the rural

Table 1: Total Status of PMGSY since its inception

	PMGSY I	PMGSY II	PMGSY III	RCPLWEA*	TOTAL PMGSY
Road Sanctioned Length	6,44,951	49,714	29,601	9,307	7,24,266
Completed Road Length	5,95,669	36,891	409	2,413	6,32,969
Balance	49,282	12,823	29,192	6,894	91,297
Progress (in%)	92.4	74.2	1.4	25.9	87.4

* Road Connectivity Project for Left Wing Extremism (LWE) Affected Areas

Table-2: PMGSY Habitation Coverage

Year	Target Length	Completed Length	Target Achieved	Target Habitation	Connected Habitation	Target Achieved
	(In Kilometers)		(In %)	(In Numbers)		(In %)
2020-21	66,784.000	11,426.435	17.11	5108	936	18.32
2019-20	50,097.000	27,301.863	54.50	9721	4156	42.75
2018-19	57,700.000	49,008.487	84.94	15000	10459	69.73
2017-18	51,000.000	48,677.693	95.45	15000	11536	76.91
2016-17	48,812.000	47,434.994	97.18	15000	11968	79.79

Source: <http://omms.nic.in>

Table 3: DDUGJY-Number of Un-electrified/Electrified Villages where Electrification Works are Completed under DDUGJY

Major States	No of Districts (as per the 2001 census)	No. of Un-electrified & De-electrified Villages where Electrification has been completed	No. of Previously Electrified Villages where Intensive Electrification has been completed	Total
Bihar	38	148	1609	1757
Chhattisgarh	16	54	329	383
Karnataka	27	0	596	596
Kerala	14	0	493	493
Madhya Pradesh	48	75	0	75
Maharashtra	36	0	829	829
Tamil Nadu	30	1	585	586
Uttar Pradesh	70	4888	1970	6858
Total of All States	279	5166	6411	11577

Source: <http://www.ddugjy.gov.in/xiph2completeplan>

areas to provide 5 crore to 8 crore deposit free LPG connections to the women of poor households. The scheme increases the usage of LPG and helped in reducing health disorders, air pollution and deforestation. Use of fossil fuels and conventional fuel like cow-dung, firewood etc. has serious implications on the health of the rural women and children.

Initially, the beneficiaries were identified through Social Economic Caste Census (SECC), 2011 data. Subsequently, the identification criteria were expanded and the beneficiaries were identified with seven identified categories in addition to SECC data. The scope of PMUY has now been expanded to cover all the poor families in the country subject to fulfilling the terms and conditions. The main feature of PMUY scheme are (i) LPG connection is released in the name of an adult women of the poor family, subject to the condition that no LPG connection exists in the name of any family member of the family, including

the applicant, (ii) under PMUY, cash assistance upto Rs.1600 is provided for releasing deposit free LPG connection, and (iii) the beneficiary bears the hot plate and the purchase of first refill. However, the beneficiary has an option to take the hot plate or the first refill or both on loan basis, from public sector oil marketing companies (OMCs) at zero interest rate.

In the year 2018-19, more than 5.9 crore LPG connections have been released under this scheme as on 31st December 2018. The original target of issuing 5 crore LPG connections was achieved by 3rd August 2018, 8 months prior to the target of 31st March 2019. Also, the target of releasing 8 crore LPG connections under this scheme has been achieved on 7th September 2019, 7 month early than the target date of 31st March 2020.

Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya): 'Saubhagya' a new scheme was launched on 25th September, 2017. Under the

Table 4: Saubhagya: Status of Household Electrification

(as on 31st March 2019)

	(In numbers)	(in %)
Total Households	21,44,91,777	100
Electrified Households	21,44,73,043	99.99
Households to be Electrified	18,734	0.01

Source: <https://saubhagya.gov.in>

Saubhagya, free electricity connections to all households (both APL and poor families) in rural areas and poor families in urban areas will be provided. There are around 4 crore un-electrified households in the country and they are targeted for providing electricity connections by December 2018. Rural Electrification Corporation (REC) has been designated as nodal agency for the Saubhagya scheme to (i) provide last mile connectivity and electricity connections to all un-electrified households in rural areas, and to (ii) provide Solar Photo Voltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible villages/habitations, where grid extension is not feasible or cost effective.

Table-4 reveals that Saubhagya has made excellent progress with 100 percent electrified household of all the States/UTs except Chhattisgarh where still 18,734 households needs to be electrified.

PM-KUSUM: The “annadata” can be “urjadata” as well. With this noble thought, the PM-KUSUM scheme has the objective of increasing farmers’ income, providing reliable source for irrigation and de-dieselise the farm sector, removing farmers’ dependence on diesel and kerosene and linking pump sets to solar energy. It is also proposed to expand the scheme to provide 20 lakh farmers for setting up stand-alone solar pumps. Further the government shall also help another 15 lakh farmers solarise their grid-connected pump sets. In addition, a scheme to enable farmers to set up solar power generation capacity on their fallow/barren lands and to sell it to the grid would be operationalised. It is a new scheme and the approval of the scheme was issued in March 2019 and scheme implementation guidelines were issued in July 2019.

Social and Commercial Infrastructure

Pradhan Mantri Awaas Yojana (Gramin): Under the “Housing for All by 2022” slogan, the Government has initiated the Pradhan Mantri Awaas Yojana–Gramin (PMAY-G) scheme w.e.f 1st April, 2016 to provide pucca houses to all rural homeless and those households living in kutcha and dilapidated houses. In addition to the rural housing, the Government of India has also aimed at providing a dignified life to the beneficiaries by providing basic amenities such as improved

sanitation, piped drinking water, electricity & gas connection, etc under convergence with existing Central and State sponsored schemes. The PMAY-G has entered its Phase-II w.e.f 1st April, 2019. The Scheme provides assistance for construction of 2.95 crore pucca houses for eligible rural households by March, 2022 in phases; one crore houses in Phase-I (2016-17 to 2018-19) and 1.95 crore houses in Phase II (2019-20 to 2021-22).

It is to be mentioned that the government of India has given a study to the reputed institute, the National Institute of Public Finance and Policy (NIPFP) to critically examine the scheme at macro as well as micro economic impact of the PMAY-G on the economy as well as on the beneficiaries’ livelihood. The findings of the report suggest that the quality of PMAY-G houses have certainly improved in terms of pucca roofs, deployment of better construction material, larger area, and ventilation. Most of the PMAY-G households were found to be satisfied with the quantum of unit assistance provided for construction of the house as well as the quality of the house.

The survey suggests that the introduction of Direct Benefit Transfer (DBT) in the programme has improved the financial inclusion in rural areas. There has been an increase in the use of banking services among the PMAY-G households through the usage of ATM cards and withdrawal slips during the construction period and post-construction as compared to the pre-construction period.

It was reported that due to pucca house that can withstand all weather conditions, a considerable reduction in open defecation post-PMAY-G, usage of the toilet and floor cleaners, etc., have led to clean and hygienic conditions, which led to an improved health status of the PMAY-G household members.

It is also reported that there has been an improvement in the schooling of children of the households post-PMAY-G period in terms of both enrolment and performance at school owing to pucca house that can withstand all weather conditions, electricity, and availability of other basic amenities. It was also observed that owning a pucca house had a positive impact on the beneficiary’s perception about living their lives with dignity and safety, and the majority of the beneficiaries felt a

significant improvement in terms of social inclusion as well.

Apart from intangible benefits, the perception of a significant number of beneficiaries regarding the income and employment opportunities was also found to be positive. This is due to massive construction activities undertaken under PMAY-G programme. In addition to this, the mean expenditure also rose in post- PMAY-G in both food and non-food items as compared to the pre-PMAY-G households indicating an improved living standard.

Overall, the PMAY-G has been bringing transformational (both social and economic) changes among the rural households. However, there is also a need for further strengthening of monitoring mechanism in order to make the scheme more efficient in terms of maintaining quality, saving time and resources, and at the same time, ensuring both tangible and intangible benefits to the beneficiaries.

Water and Sanitation

“Jal Hi Jeevan Hai” (Water is Life). Water is an essential commodity and the whole world is focussing on the scarcity of potable drinking water. Water stress related issues are now a serious concern across the country. The government is proposing comprehensive measures for one hundred water stressed districts. A very focused safe water (Jal Jeevan Mission) and comprehensive sanitation program (Swachhh Bharat Mission) have been launched to support the health vision. That would reduce the disease burden on the poor.

Jal Jeevan Mission (Har Ghar Jal): Jal Jeevan Mission, is aiming to provide piped water supply to all households. The Prime Minister announced the Jal Jeevan Mission from the Red Fort on Independence Day, 2019. The government has approved Rs.3.60 lakh crore for this Mission. It envisioned to provide safe and adequate drinking water through individual household

tap connections by 2024 to all households in rural India. The programme also implements source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting. The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission.

Table-5 indicates that the progress under JJM is in good speed till 10 December 2020, 31.38 percent households were connected with tap water. In August 2019, the tap connected households were only 17 percent.

Swachh Bharat Mission (Grameen): Under the mission (SBMG), all villages, Gram Panchayats, Districts, States and Union Territories in India declared themselves “open-defecation free” (ODF) by 2nd October 2019, the 150th birth anniversary of Mahatma Gandhi, by constructing over 100 million toilets in rural India. To ensure that the open defecation free behaviours are sustained, no one is left behind, and that solid and liquid waste management facilities are accessible, the Mission is moving towards the next Phase-II of SBMG i.e ODF-Plus. ODF Plus activities under Phase-II of Swachh Bharat Mission (Grameen) will reinforce ODF behaviours and focus on providing interventions for the safe management of solid and liquid waste in villages.

Since 2nd October 2014 till date, a total of 10.73 crore household toilets were built which includes 6.03 lakh ODF free villages and 706 ODF free districts and all the States and UTs were also ODF free.

Sewage Collection, Treatment and Disposal System: The Government is committed to open defecation free (ODF) Plus in order to sustain ODF behaviour and to ensure that no one is left behind. Now, more needs to be done towards liquid and

Table 5: Jal Jeevan Mission- Status of tap water supply in Rural Homes

	(in numbers)	(in %)
Total Number of eligible household	19,10,85,542	
Households with tap connections as on 15th August 2019	3,23,62,838	16.94
Households with tap connections as on 10 December 2020	5,99,71,857	31.38

Source: <https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx>

grey water management. Focus would also be on Solid waste collection, source segregation and processing. 63.3 percent of rural population is practising solid liquid waste management (SLWM).

Communication

The government's vision is that all "public institutions" at Gram Panchayat level such as Anganwadis, health and wellness centres, government schools, PDS outlets, post offices and police stations will be provided with digital connectivity. So, Fibre to the Home (FTTH) connections through Bharatnet had linked 100,000 gram panchayats. It was proposed to provide Rs.6000 crore to Bharatnet programme in 2020-21.

Mapping of India's genetic landscape is critical for next generation medicine, agriculture and for bio-diversity management. To support this development, the government initiated national level Science Schemes, to create a comprehensive database.

BharatNet: BharatNet is the world's largest rural broadband network project which is to provide broadband connectivity to all the 2.5 lakh gram panchayats (GPs) across India.

The scheme implemented in two phases. Under Phase-I, the target to connect one lakh gram panchayats is completed. Around 19952 out of 27534 kms of lossy optical fibres (OF) cables of BSNL replaced by new cables. Moreover, additional work front of 26264 gram panchayats were given to complete one lakh gram panchayats of this phase but at present work is under progress in these gram panchayats.

Under phase-II, around 1.31 lakh gram panchayats including panchayats over satellite media to be connected. The satellite component of Phase-II is being implemented by the Bharat Broadband Network Limited (BBNL) (4821 gram panchayats) and BSNL (1407 gram panchayats). These all have been implemented through PPP model.

The overall project status as on 4th December 2020 shows that 4,75, 810 kms. length of optical fibre cables has been laid which includes 1,61,923 gram panchayats where OFC has been laid and 1,48,588 gram panchayats were made service ready on fibre and satellite.

Finally, the infrastructure schemes for the rural areas have improved the lives of the rural people in different ways and helped in reducing the poverty. People are connected to the nearest city centres and the district headquarters by road and also connected by electronic communication. By providing tap water to the households and rural road connectivity and housing, there is a visible improvement in the health indicators and school enrolment. Infrastructure has brought social and economic change among the rural households and empowered them to live their lives with dignity and safety with improved living standards.

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